The Dialogic Potential of Providing Audio Versus Written Assignment Feedback in Higher Education: A Mixed Method Study

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Statement of the Contribution of Others

This thesis has been made possible through the support of the following individuals:

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Abstract

Student surveys conducted within the UK have highlighted student dissatisfaction with the written feedback they receive on their assignments in higher education and many institutions have been devising ways to address this issue. Most of this work has aimed to improve the content of tutors' written feedback comments. Alongside emergent conceptual literature, this study takes a different perspective. It purposes that the many expressions of student dissatisfaction with their written assignment feedback may be understood as indications of impoverished student-tutor dialogue. Mass higher education is reducing the opportunities for dialogue to occur with the result that written feedback, which is essentially a monologue, commonly must carry the burden of student-tutor interaction. This perspective suggests that once rich forms of student-tutor interaction are reinstated in higher education, feedback may become more effective. This study holds interest in how the nature and quality of feedback dialogue may be enhanced through new technologies. Specifically, interest is held in exploring how far the provision of feedback to students using audio technology may better serve as a facilitator of dialogic feedback in higher education, than the traditional method of written feedback. To effectively identify the potential impact of providing audio feedback in higher education, the Three Factor Framework for Dialogic Feedback provided by Yang and Carless (2013) has been used as a lens through which to design and conduct this study. A mixed method design was implemented to develop a more complete understanding of the experiences of those receiving feedback though this technological medium. The design accommodated for both an analysis of what feedback tutors provide to students on their assignment, alongside an analysis of how students themselves feel they receive and interact with their tutor's comments. Results of this study strongly infer the merits of using audio technology to facilitate a dialogical approach to designing feedback. The study concludes by providing recommendations for best practice in higher education.

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1 INTRODUCTION

1.1 Background

Assessment feedback is recognised as a key element within the learning process (Nicol & Macfarlane-Dick, 2006) and the UK Quality Assurance Agency for Higher Education (QAA, 2011) understands feedback as a measure of teaching quality. Despite this interest, dissatisfaction with assessment feedback is often highlighted within academic research and institutional student surveys (Agius & Wilkinson, 2014). In the UK higher education system, the National Student Survey (NSS) measures final year students' satisfaction with many features of their course and institution. Every year since the NSS began the results have shown that students rank assessment feedback one of the least satisfactory features of their university experience (HEFCE, 2017). The results of the NSS suggest that students do not find their expectations met in the written feedback they receive from their tutors (Nicol, 2010). This interpretation is supported within the academic literature, as many studies clearly detail student dissatisfaction as stemming from the lack of quality, quantity, and feedforward potential of their tutors' written feedback comments (Agius & Wilkinson, 2014).

Due to these findings, it is the practical desire of many in the field to improve feedback practice in higher education (Yang & Carless, 2013). Over the past decade, the research literature has attempted to solve this issue using different theoretical understandings of assessment feedback (Nicol, 2010). While a variety of understandings of assessment feedback exist within the literature, they may be broadly categorised into three main approaches: cognitivist information transmission, constructivism and socio-constructivism. The cognitivist strand of research understands assignment feedback as an input message, which appears to be unclear and lacking in quality (Duncan, 2007; Lizzo & Wilson, 2008). Therefore, supporters of this approach suggest that tutors need to improve the content of their feedback comments (Paulos & Mahony, 2008; Walker, 2009). Representative of this perspective are the survey items emplaced in the UK NSS, whereby questions are asked concerning the quality of feedback delivery (e.g. 'I received detailed comments on my work') and official responses usually revolve around improving what is written by the tutor in their feedback comments (Nicol, 2010). Taking this perspective, improvements to feedback would include providing students with more detailed and timely comments about their work, with clearer suggestions about how to improve for subsequent assignments. On its own, this

approach to overcoming student dissatisfaction represents a *transmission* view of assessment feedback (Nicol, 2010).

The constructivist perspective of assessment feedback is interested in how the feedback process is conceptualised within higher education and the role students take in that process (Sadler, 1998). Researchers in this area argue that students need to be re-envisaged as active participants in constructing and using their feedback (Sadler, 1998). This perspective understands that feedback delivery on its own does not lead to an improvement in student achievement. Rather, for students to learn from their feedback they need to actively do something with the transmitted information provided by their tutor and use it to change their future work (Boud & Falchikov, 2007). Therefore, this second approach understands that while the content of feedback provided by tutors is important, it is the students' use and interaction with the comments themselves that is considered as more important.

However, the socio-constructivist approach goes beyond the single focus of either reformulating the content of tutors' comments or encouraging the active role of the student, by conceptualising feedback as a dialogical two-way process that involves rich forms of student-tutor communication as-well-as active student engagement (Ajjawi & Boud, 2015; Beaumont, O'Doherty, & Shannon, 2011; Nicol & MacFarlane-Dick, 2006; Nicol, 2010; Yang & Carless, 2013). The socio-constructivist perspective of assessment feedback posits that tutor comments should be dialogic to help students to develop their abilities to monitor, evaluate and self-regulate their learning (Ajjawi & Boud, 2015). Drawing upon Vygotsky (1978) and social constructionist interpretations of learning (Wells, 1999), Nicol (2010) argues:

> The many diverse expressions of dissatisfaction with written feedback can be interpreted as symptoms of impoverished and fractured dialogue. Mass higher education is squeezing out dialogue with the result that written feedback, which is essentially a monologue, is now having to carry out much of the burden of teacher-student interaction (p. 503).

As such, this approach understands feedback as "all dialogue to support learning in both formal and informal situations" (Askew and Lodge, 2000, p. 1). Dialogue is seen as more than a conversation, it encapsulates the relationships whereby tutors and students reason and think together (Yang & Carless, 2013). The emphasis on dialogue is a strong attempt to circumvent the limitations and dissatisfaction aimed at written feedback (Carless, 2006;

Nicol, 2010; Yang & Carless, 2013). Literature in this field argues that when the dialogic context of feedback is reinstated in higher education, feedback may become more effective (Yang & Carless, 2013).

Yang and Carless (2013) provide a conceptual framework that enables an analysis of the extent to which dialogic feedback is encouraged in any given discipline. From reviewing the existing knowledge base on dialogic feedback practices in higher education, Yang and Carless (2013) classify the emergent themes into three dimensions: cognitive, social-affective, and structural. From their analysis, these authors suggest a 'feedback triangle' focused on the content of assessment feedback (*cognitive* dimension), the interpersonal negotiation of tutors' comments (*social-affective* dimension) and the organisation of feedback provision by assessors in higher education institutions (*structural* dimension). Importantly, Yang and Carless (2013) note the interplay between these three fundamental elements as central to the success of building a dialogic feedback process in higher education (Yang & Carless, 2013).

Importantly for this thesis, Yang and Carless (2013) impress the rewarding potential of research focusing upon innovative methods of technology enhanced feedback within the structural dimension. Considering the current challenging climate of higher education, the utilisation of new technologies is believed to be the most feasible method to stimulate and facilitate dialogic feedback in the discipline (Ajjawi & Boud, 2015; Nicol, 2010; Yang & Carless, 2013). Specifically, Yang and Carless (2013) hypothesise that using audio technology to provide feedback may recreate a sufficiently *dialogic* and rich form of communication, involving nuance of voice and paralinguistic features, that dialogic theorists (e.g. Wells, 1999) describe as necessary to the development of effective disciplinary learning. Despite these claims, there is a lack of research that has *directly* assessed the potential of this technology enhanced feedback method grounded in pedagogic theory (Nortcliffe & Middleton, 2011). As such, it is suggested further empirical data grounded in a clear theoretical framework is needed to support and extend upon what previous studies have found, while providing a clear pedagogic rationale.

1.2 Aim of the Study

The aim of this study, undertaken between 2016 and 2018, was to measure and explore how far providing feedback to students using audio recording technology may better serve as a

facilitator of dialogic feedback in higher education, than the traditional method of written feedback.

1.3 Purpose of the Study

The purpose of this mixed methods study was to explore the dialogic potential of audio feedback in a higher education context. The study outcomes aimed to contribute to the evidence suggesting the potential of technology enhanced feedback methods in overcoming some of the issues currently raised with written feedback and improve student learning in higher education. As such, the design of the study was developed to address issues arising within each of the dimensions outlined by Yang and Carless (2013) in their Three Factor Framework for Dialogic Feedback. It is believed the utilization of this theoretical framework enabled the researcher to identify areas for further exploration and assess the extent to which the audio modality better facilitates dialogic feedback in higher education.

1.4 Study Questions

The overarching question to guide the study was:

Compared to using traditional methods of written feedback, how far might providing assessment feedback to students using audio recording technology serve as a facilitator of effective dialogic feedback in higher education?

Four underlying research questions were derived from the overarching question:

1. How far might the provision of assessment feedback to students using audio recording technology encourage the cognitive features of dialogic feedback, when compared to written feedback?

2. How far might the provision of assessment feedback to students using audio recording technology encourage the positive social-affective features of dialogic feedback, when compared to written feedback?

3. How might the provision of assessment feedback to students using audio recording technology encourage the structural features of dialogic feedback, when compared to written feedback?

4. How might the research findings have real world application when applied to improve feedback practice in higher education?

1.5 Overview of Study Design

A mixed method sequential explanatory study was conducted. Sequential designs occur when the quantitative phase of data collection happens before the qualitative phase of data collection. In this study, the quantitative phase arose first to help identify the appropriate questions for the second qualitative phase of the study. Explanatory studies like this are used when the intent is to conduct a qualitative phase of the study, which helps to explain and provide a deeper level of understanding of the previous quantitative results (Creswell, 2015). Specifically, it was believed a mixed method design would best develop an understanding of the experiences of those students receiving audio feedback in higher education. This is as an analysis of *what* feedback tutors provide to students on their assignment, alongside an analysis of how students *themselves* feel they receive and interact with such comments, could be conducted to build a holistic understanding of the phenomena of interest.

1.6 Significance for Higher Education

The motivation behind this study lay in in the abundance of literature critiquing the traditional method of written feedback used in higher education (Agius and Wilkinson, 2014; Bailey & Garner, 2010; Bevan, Badge, Cann, Willmott & Scott, 2008; Duncan, 2007; Weaver, 2006). In order to overcome these limitations, recent literature suggests assignment feedback needs to be reconceptualised as more of a dialogue between the student and tutor (Nicol, 2010). As such, this thesis takes the view that a dialogic approach to assessment feedback offered by Yang and Carless' (2013) conceptual framework, can be better employed by tutors when providing students with audio feedback. Based upon the findings of this mixed method study, practical steps for tutors and students to implement when using audio feedback have been recommended. These recommendations offer a starting point for the development of effective feedback practice that may benefit students in higher education.

Furthermore, it is believed such recommendations may be used to help re-establish the dialogic nature of feedback in higher education, by creating opportunities for students to engage in self-reflection, feel confident to approach their tutor for further face-to-face feedback, and be encouraged to re-listen to their feedback over time.

1.7 Organisation of Thesis

This thesis is divided into eight chapters. This first chapter is the introduction providing a short overview of the aims and the structure of the thesis. Figure 1.1 depicts the framework of this thesis.

Chapter Two reviews the literature in areas pertinent to the study. This chapter begins by discussing the importance of effective assignment feedback in higher education. Several barriers are noted with the development of effective feedback in the current context of higher education, which are often exacerbated when tutors use written feedback methods. Specifically, the reviewed literature suggests student dissatisfaction with their written assignment feedback stems from its lack of quality, quantity, and feedforward potential. To overcome these issues, the conceptual literature argues the study of feedback in higher education needs new thinking and reconceptualization. Reinforcing this viewpoint is a conviction that making relatively superficial adjustments, such as enhancing the volume or promptness of feedback provision would be insufficient to significantly move the field forwards. A promising development elaborated upon in the literature is the notion of dialogic approaches to feedback. Importantly, this chapter goes on to explore how teachers may optimally construct dialogic feedback in order to encourage students' productive learning using Yang and Carless' (2013) Three-Factor Framework. Within this Framework, technology enhanced feedback is noted as a promising platform to facilitate dialogic approaches to feedback provision. This chapter concludes that the use of audio feedback may provide a feasible method to stimulate and facilitate dialogic feedback in higher education. The rationale and research questions for this study are provided, emphasising the need to embed future research within clear pedagogic theory and build a holistic understanding of the experiences of those receiving audio feedback in higher education.

Chapter Three outlines the theoretical framework, design and methods underpinning the study. Using pragmatism as a theoretical underpinning and Yang and Carless' Three Factor Framework for Dialogic Feedback as a theoretical perspective, an advanced mixed

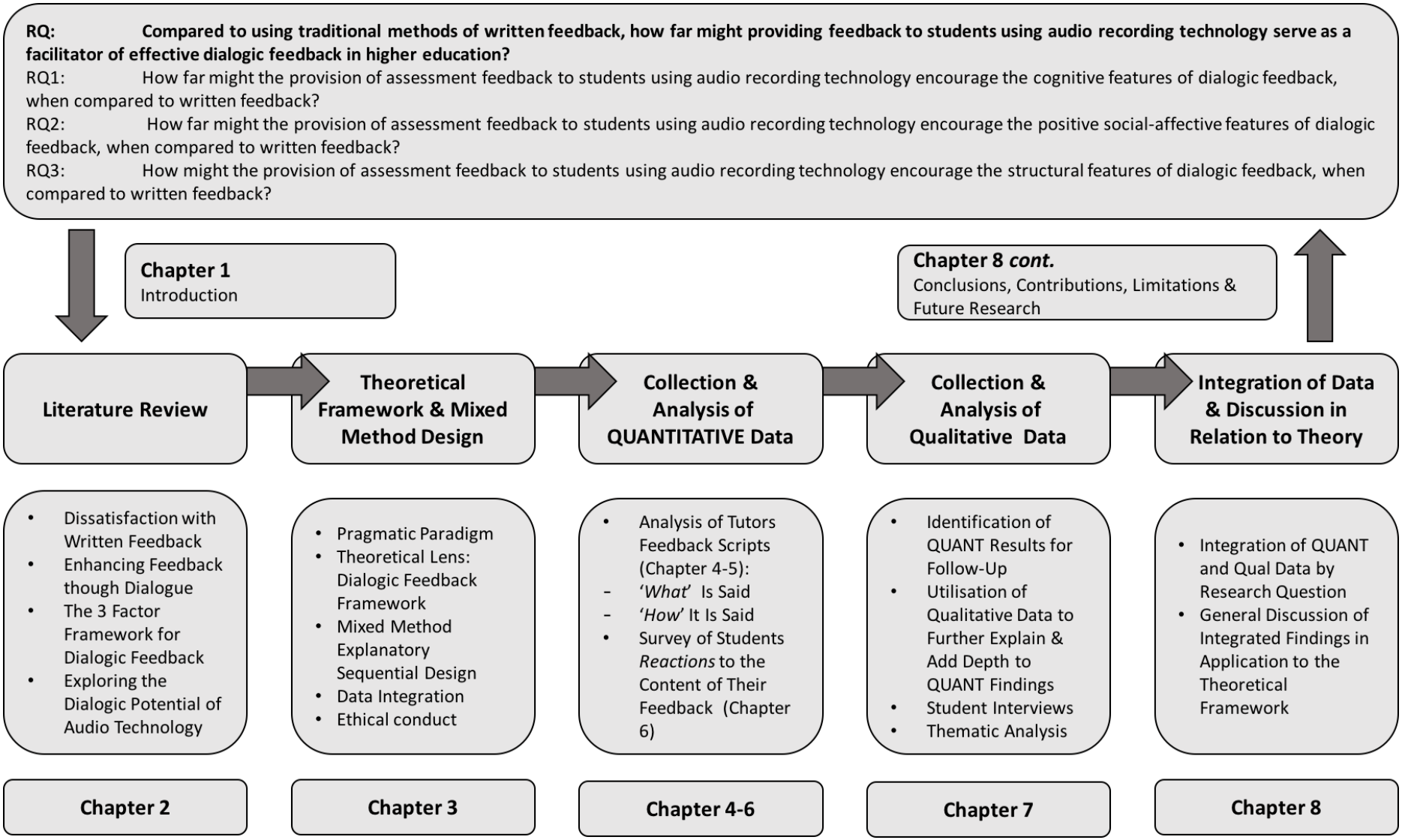

Figure 1.1 Thesis Framework

method sequential explanatory design was used to explore the potential of audio technology to provide feedback to students in a social science discipline in one UK higher education institution. The chapter briefly describes the methods of data collection and data analysis techniques used in both phases. This chapter also discusses the data integration methods used within this study and proceeds to outline the structure of the thesis, with Chapters Four to Six detailing the collection of quantitative data and Chapter Seven outlining the collection of qualitative data from the study.

In order to ascertain the experiences of students when receiving audio feedback, Chapter Four details the individual components from the comparative content analysis, which focuses upon '*what*' types of issues tutors discuss in their assignment feedback. Specifically, the data presented in this chapter aimed to assess whether providing audio as opposed to written assignment feedback has impact upon the types of issues tutors comment upon and the depth of such comments provided by tutors. A description of the sampling technique, methods of quantitative data collection and the classification system used to assess the tutors' feedback scripts is included. This chapter concludes with a short discussion, which primarily considers the findings of this data in relation to the cognitive dimension of the theoretical framework.

The analysis detailed in Chapter Five supplements content based interpretations of feedback with a quantitative linguistic analysis of '*how*' tutors' articulate their feedback comments. While the sample and data analysed was the same as that used in Chapter Four, a different perspective of the data is added via the use of a new analytic framework. Specifically, Hallidayian-inspired linguistic analysis allows for an understanding of how the language used by the tutor to express their feedback may impact a student emotionally and build differing types of student-tutor relationships. In contrast to the analysis presented in Chapter Four, this chapter concludes with a short discussion that considers the findings of this data in relation to the social-affective dimension of the theoretical framework.

Unlike data outlined in previous chapters, the quantitative data gathered and presented in Chapter Six focuses upon student perceptions through the use of an end of module survey. Specifically, the data reported in this chapter were simultaneously gathered alongside the feedback script data, so to build an understanding of students' *reactions* to feedback content provided using audio recording technology. A description of the survey methodology employed when collecting this data type is addressed. A discussion of the results of this data is included within this chapter, in relation to all three dimensions of the theoretical framework.

Chapter Seven details the individual components of the qualitative phase of the study. The chapter reports the collection of qualitative data through the use of in-depth semi-structured interviews with students who received audio feedback. As this study used explanatory sequential design, a matrix derived from the quantitative data presented in Chapters Four to Six identified issues and topics to form the foundation of more in-depth exploration. A qualitative approach was chosen to analyse the data and the resulting discussion portrays the voice of the participants.

Chapter Eight presents a comprehensive integration of the study findings and concludes the thesis. The data from each phase of the study is presented visually in the form of "follow-up results joint display" tables (Creswell, 2015, p. 85), which integrate the quantitative and qualitative findings for this study; an important requirement of mixed methods work. As Yang and Carless' (2013) Three Factor Framework for Dialogic Feedback was used as a theoretical underpinning for the study, a discussion of the findings is then provided in the context of each of the three dimensions of the framework. Upon discussing the findings of this study, this chapter provides a consideration of the strengths, limitations and applications to theory and future research offered by this project. As well as applications to research, this chapter provides teachers and students with practical recommendations for best practice when using audio feedback in higher education. Finally, a summary of the study is provided which concludes the thesis.

1.8 Summary of the Chapter

This introductory chapter has presented an overview of the key elements of the study. The chapter has provided a brief background and rationale that outlines the need for the research. In sum, this study formulates a more comprehensive understanding of how far providing feedback to students using audio recording technology may better serve as a facilitator of dialogic feedback in higher education, than the traditional method of written feedback. To achieve this, the study theoretically engages with Yang and Carless' (2013) Three Factor Framework for encouraging dialogic feedback in the discipline. The study contributes to the growing literature surrounding the benefits of providing more dialogic forms of assignment feedback in higher education and the rewarding outputs that may arise from technology enhanced methods of feedback provision. The following chapter, Chapter Two, reviews the current literature in the areas pertinent to the study and develops a more in-depth rationale for the study questions.

2 LITERATURE REVIEW

2.1 Introduction

The review will first define and examine the current methods of feedback practiced in higher education. It will discuss both formative and summative types of assessment feedback and consider the impact each has on a student's learning (Gibbs & Simpson, 2005). The prevalence of written assessment feedback in higher education is highlighted, followed by a discussion outlining student dissatisfaction with this method of feedback as noted in UK National Student Surveys (HEFCE, 2017) and academic research (Agius & Wilkinson, 2014). This first section of the literature review closes by reviewing the issues students and tutors face with current written feedback practice in higher education and the need for 'better' assignment feedback.

Second, the chapter will review literature that seeks to theoretically strengthen students' learning. The educational notion of pedagogy is introduced as the act of teaching supported by ideas, values and theoretical histories (Alexander, 2008). The chapter proceeds by outlining dialogic pedagogy, underpinned by scholars such as Vygotsky and Halliday, which increasingly informs current teaching practice (Skidmore & Murakami, 2016). This first section of the review continues by detailing how this theoretical foundation impresses the importance of replacing the lecture-based transmission model of learning with a student-centred interactional model, whereby students must actively engage in meaningful dialogue with their tutors (Mercer & Howe, 2012).

The justification for undertaking a review of the theoretical underpinnings of dialogic pedagogy (Skidmore & Murakami, 2016), is to examine how the notion of dialogue could help overcome the issues currently facing assessment feedback in higher education. To address the many diverse expressions of dissatisfaction with written feedback, this chapter reports upon the shift in theoretical thinking within the higher education feedback literature. Emphasis is placed upon conceptual contributions (e.g. Beaumont, O'Doherty, & Shannon, 2011), which outline dialogic approaches to feedback. Primary focus is given to the Three-Factor Framework for Dialogic Feedback provided by Yang and Carless (2013), which examines how teachers may design dialogic feedback to foster students productive learning. Importantly, this section outlines literature referring to traditional written comments as representing "impoverished dialogue" (Nicol, 2010, p. 501). Consequently, interest is held upon the potential role of new technologies in creating opportunities for dialogue to occur (Dixon, 2015).

Fourth, the use of audio recording technology is introduced as a method of providing feedback to students. To analyse the value that audio feedback may afford, the literature pertaining to this specific area of enquiry is categorised in accordance to the three-factors presented in the Framework for Dialogic Feedback (Yang & Carless, 2013). First, literature will be critically discussed that examines the quality of feedback content provided to students when using the audio modality and its potential impact on a student's ability to cognitively engage with their feedback (Merry & Orsmond, 2008). The section will then move on to discuss the social and relational effects of receiving audio feedback and the impact this may have on a student's emotional response to their tutor's comments (Ice, Curtis, Phillips & Wells, 2007). Finally, practical issues noted in the literature are examined, which includes issues of tutor and student satisfaction concerning timing, sequencing and the use of different platforms to provide audio feedback (Chiang, 2009). This section of the review concludes by suggesting the promising potential of the audio feedback to create opportunities for dialogue to occur in the discipline. The last section of this chapter will summarise knowledge gaps revealed through the literature review and conclude with the research questions formulated for the study.

2.2 Feedback Practice in Higher Education

2.2.1 Definitions and Purposes of Assignment Feedback

A limited number of studies have explored the meaning of assessment feedback and there is no commonly agreed definition within the literature (Evans, 2013). As highlighted by Clark (2010), some perceive assessment as purely a measurement tool (Quality Assurance Agency, 2011), while for others, assessment feedback is seen as an intregal element of assessment (Angelo, 1995). Akin to others in this area (e.g. Evans, 2013), this review comprehends assessment feedback as an umbrella term to capture the diversity of definitions and types of feedback discussed within the literature. Such an understanding enables the inclusion of the diverse functions, meanings and types of feedback, as well as the conceptual frameworks underpinning various feedback philosophies (Evans, 2013). Consequently, as proposed by Evans (2013), assignment feedback is thought to encapsulate:

> All *feedback exchanges* generated within assessment design, occurring within and beyond the immediate learning context, being overt or convert

(actively and/or passively sought and/or received) and importantly, drawing upon a range of sources (p. 71).

When adopting this definition, the differential conceptions of assessment and assessment feedback must be acknowledged. There are two generally agreed upon types of assessment within the literature (Race, 2014). Upon this spectrum, summative assessments aim to asses a student's ability at the end of a program, whereas formative assessments are designed to evaluate a student's progress throughout a program and often does not contribute to their final grading (Trumbull & Lash, 2013). Consequently, for some, assessment feedback is understood as an end product or the result of an act: "information provided by an agent (e.g. teacher, peer, book, parent, self-experience) regarding aspects of one's performance or understanding" (Hattie & Timperly, 2007, p. 81). However, for others, it is seen as fundamental to learning (Beaumont, O'Doherty, & Shannon, 2011) and as a "sequential process rather than a series of unrelated events" (Archer, 2010, p. 101). As such, writers seeing feedback as part of an ongoing process to support learning, use the terms *feed-forward* and *feed-up* to describe aspects of *formative* feedback, which point towards what the student could do to improve and develop future work (Hounsell, McCune, Hounsell, & Litjens, 2008). This contrasts to the 'end-product' conceptions surrounding *summative* feedback, which principally refers to what was and what was not achieved by a student in their past work (Race, 2005).

Functionally, considering the work of Ramaprasad (1983) and Sadler (1989), the aim of assignment feedback is to enable the gap between actual and desired level of performance to be bridged (Evans, 2013). For many, it is only considered feedback if it has an impact on learning and alters the gap in some way (Draper, 2009; Parboteeah & Anwar, 2009; William, 2011). Importantly, feedback may have different functions depending on the feedback paradigm adopted (Poulos & Mahony, 2008). Of those who explicitly engage with paradigms, most distinguish between cognitivist and socio-constructionist views of assignment feedback, with much of the current interest being placed upon the latter (Evans, 2013). The cognitivist paradigm is strongly associated with a transmission or directive approach, whereby feedback is understood as corrective, with an expert delivering information to a passive recipient (Evans, 2013). Alternatively, feedback is viewed within the social-constructionist paradigm as facilitative, in that it discusses the provision of comments and suggestions to assist students to make their own revisions and further develop their own learning (Archer, 2010). Importantly, the social-constructivist perspective taken in this

review (see Section 2.2.3) emphasises the role of interaction between participants in learning environments, which helps students to gain new understandings without dictating what such understandings will be (Carless, Salter, Yang, & Lam, 2011). In these interactions, students are thought to become increasingly part of the disciplinary community of practice, which will enable them to take more responsibility for acting upon their feedback (Wenger, McDermontt, & Synder, 2002).

From this, many researchers have sought to highlight the main purposes of assignment feedback. To provide an example, Hattie and Timperley (2007) deconstructed pieces of feedback provided to students and their findings differentiated between four types of comment (task, process, self-regulation and self), which they suggest all hold different outcomes on a student's learning. Defining these terms, *task feedback* is thought to provide information with the purpose of clarifying aspects of the learning task, *process feedback* identifies what a student can do to better continue with a learning task, *self-regulation* feedback develops cognitive attributes so the student can evaluate skills she or he employs, and *self-feedback* focuses on the student's personal characteristics. Further developing these types, Nelson and Schunn (2009) identified three general purposes of assignment feedback: (a) *informational* so to change a student's future performance in a specific area, (b) *reinforcement* in order to reward or punish a student's behaviour or performance, and (c) *motivational* to influence a student's perceptions and want to improve. However, when considering such frameworks, it is important to acknowledge that feedback often consists of a mixture of these features, and that the variable combination of any may impact a student's reception of such comments (Evans, 2013). Thus, these elements ought to be understood as integrated into the process of giving and receiving assignment feedback, as opposed to separate dimensions (Evans, 2013).

2.2.2 Introducing the Context of Assignment Feedback in Higher Education

There is a body of literature in higher education contexts considering assignment feedback and its importance in furthering students learning (Bailey & Garner, 2010). Feedback is understood in higher education as an important means of encouraging students to develop into active and independent learners who are able to evaluate their own progress (Furguson, 2011). Eraut (2006), highlighted the potential impact of assignment feedback on a student's development in higher education:

> When students enter higher education . . . the type of feedback they then receive, intentionally or unintentionally, will play an important part in shaping their learning futures. Hence, we need to know much more about how their learning, indeed their very sense of professional identity, is shaped by the nature of the feedback they receive. We need more feedback on feedback (Eraut, 2006, p. 118).

While the role of feedback in the development of learning is acknowledged widely in the literature (e.g. Hattie & Timperly, 2007), Hounsell (2007) argues that the higher education system in Britain has given it a 'Cinderella status' which attracts limited research interest. He categorises the research that has been conducted in the UK into three groups: (a) students' understandings concerning the assessment criteria (e.g. Penny & Grover, 1996), (b) lecturer and student perceptions and experiences of assignment feedback (e.g. Carless, 2006), and (c) the type of comments employed in feedback by tutors (e.g. Mutch, 2003). As noted by Evans (2013) in reviewing the literature, the focus in all three is predominantly upon the student experience, with only limited insight on the experience of academic staff. The same may be said in the current context of research in UK higher education (e.g. Morris & Chikwa, 2016), as a student-centred approach is commonly used when investigating differential methods of providing feedback to students.

Typically, such literature studying higher education institutions highlights dissatisfaction with assessment feedback (Evans, 2013). From the lecturer perspective, issues often concern students not using or acting upon their feedback and the pressures of mass higher education on staff workloads (Yorke, 2002). From a student perspective, complaints commonly concern the technicalities of feedback, such as the organisation of assessment activities, the timing of receiving feedback, issues with feedback content, and the vague or impersonal nature of tutor's comments (Agius & Wilkinson, 2014; Evans, 2013; Higgins, Hartley, & Skelton, 2001). It has been argued by some (Evans, 2013; Lew, Alwis & Schmidt, 2010), that a consideration of both perspectives uncovers a feedback 'gap' in higher education, whereby further research is needed so to understand how to feasibly improve feedback practice.

Much of the limited literature examining the lecturer perspective on feedback practice is considered against the current climate of change and reform in higher education (Bailey & Garner, 2010). Teaching has been semesterised in most institutions and courses have been modularised into blocks in order to create flexibility in the teaching curricular

(Yorke, 2002). As such, assessment has been end-loaded and greater formality has been introduced with standardised marking procedures and external adjudication (Bailey & Garner, 2010). With increased class sizes and more subject areas, lecturers have less time to provide feedback and there are fewer opportunities for one-to one tutorial interactions between tutors and students (Department for Education & Skills, 2003; Hounsell, McCune, Hounsell, & Litjens, 2008). Writing over 20 years ago, Hounsell noted in assessment feedback "the traffic of comments from tutor to student is overwhelmingly in the written form" (1987, p. 113). Due to pressures on academic staff, the same appears to be true today, despite innovation and changes made by new teaching and learning technologies (Bailey & Garner, 2010; Agius & Wilkinson, 2014). As such, a commonly expressed issue is that even though tutors spend time writing comments on assignments, students often do not act upon or use the feedback provided (Li & De Luca, 2014).

The current climate of change in higher education also forms the backdrop to understand student perceptions of assignment feedback (Bailey & Garner, 2010). In the past, as student numbers were smaller, written feedback was given as part of a larger system of student-tutor communication that also involved one-to-one meetings and the drafting of assignments (Bailey & Garner, 2010; Nicol, 2010; Yorke, 2002). While this feedback system may still be used in select universities (i.e. Cambridge or Oxford), due to the massification of higher education, in most institutions written comments have been separated from their supportive context (Bailey & Garner, 2010; Nicol, 2010). The result is student dissatisfaction with the feedback provided by their tutors, as evidenced in a number of surveys, research studies and national reports (Nicol, 2010).

One source of information about student perceptions of assignment feedback in UK higher education comes from the National Student Survey (HEFCE, 2017). In the National Student Survey (NSS) final year students are asked to rate their satisfaction with several different course features. While the NSS does not declare specifically what type of feedback is under scrutiny the wording of the statements imply the referent as written assignment feedback (Nicol, 2010) and this interpretation is supported by student interviews conducted by McDowell, Smailes, Samball, Sambell, and Wakelin (2008). Every year since the survey began, the results have shown that assessment and assignment feedback receives lower ratings than any other course element (HEFCE, 2017). For example, in England 27% of students reported that their feedback was not promptly delivered and 26% stated that it did not provide them with helpful comments to improve (HEFCE, 2017). Interestingly, these results are not restricted to the UK as dissatisfaction with written feedback is revealed

internationally through other national student surveys, such as the Australian Course Experience Questionnaire (Nicol, 2010; Rowe & Wood, 2008).

Research studies have highlighted a greater variety of issues that underlie student dissatisfaction with written assignment feedback. In a recent narrative literature review of students' views of written feedback at undergraduate level, Agius and Wilkinson (2014) identify four main themes impacting student satisfaction: quality, quantity, feedforward and timeliness of tutor comments. In this review, the quality of feedback was reportedly effected by a perceived imbalance of positive and negative comments (e.g. Bevan et al., 2008; Duncan, 2007; Weaver, 2006), a want of focused personal and specific feedback rather than vague generic comments (e.g. Duers & Brown, 2009; Poulos & Mahony, 2008), and a reduced understanding due to a lack of linguistic clarity and use of academic terminology in tutor feedback (e.g. Bailey & Garner, 2010; Higgins, Hartley, & Skelton, 2002). By the quantity of feedback, students' often reported feeling dissatisfied with brief comments about their work and placed emphasis on wanting detailed comments, with examples and explanations provided by their tutor (e.g. Carless, 2006; Lizzo & Wilson, 2008). Students' inability to feed-forward and productively use tutor comments to improve their future work has also been reported by studies, which find tutor comments lack suggestions for improvement (e.g. Bailey & Garner, 2010; Bevan et al., 2008; Koh, 2010; Orsmond & Merry, 2011). Finally, Agius and Wilkinson (2014) identify research (e.g. Bone, 2006; Duncan, 2007; Poulos & Mahony, 2008) highlighting student disappointment with the timeliness of feedback, suggesting students often wanted to receive their feedback more promptly, especially if it was a formative piece of feedback that held relevance to their future work. Thus, students want feedback to be provided in enough time for it to be useful to them (e.g. Beaumont, O'Doherty & Shannon, 2011).

However, as noted by Agius and Wilkinson (2014) and others (e.g. Evans, 2013), research identifying the type of feedback students prefer in higher education is not firmly based on substantive evidence. Concerns have been raised about the quality of the empirical research base (Walker, 2009) and the significant lack of consistency in trending results (Carillo-de-la-Pena, Casereas, Martinez, Ortet, & Perez, 2009). Specifically, many have argued that student opinion on what constitutes 'good' feedback is varied and provides tutors with little grounding for what works best when providing assessment feedback (Ball, 2010). While literature highlights many origins of dissatisfaction for students, there appears to be limited consensus on what practices are most effective (Evans, 2013). For example, where timing of feedback is considered, both delayed and immediate tutor response can be useful,

yet this is dependent upon the individual student and program variables (Fluckiger, Vigil, Tixier, Pasco, & Danielson, 2010). Similarly, there is mixed evidence outlining the ideal volume of feedback provided to students as some confusion is held over what constitutes a detailed tutor response (Lipnevich & Smith, 2009). Considering this, Kluger and DeNisi (1996) contemplated whether questions concerning 'what details of assessment feedback work and what details do not' are answerable or are even the right questions to ask given the subjective nature of the phenomena.

2.2.3 The Need for a Paradigm Shift?

Over the past decade, the research literature aiming to improve assignment feedback has approached the issue from three different theoretical perspectives: cognitivism, constructivism and socio-constructivism (Nicol, 2010). The cognitivist strand of research understands tutor feedback in higher education as an input message, which is unclear and lacking in quality (Duncan, 2007; Lizzo & Wilson, 2008). Therefore, supporters of this approach argue more work should go into improving the way in which feedback comments are formulated by tutors (Paulos & Mahony, 2008; Walker, 2009). Seen as representative of this perspective are the survey items presented in the UK NSS, whereby questions concern the quality of feedback delivery (e.g. 'I received detailed comments on my work') and institutional responses usually revolve around improving what the tutor writes in their feedback comments (Nicol, 2010). As such, improvements to feedback might include providing students with more detailed and timely comments about their work, with clearer suggestions given about the ways of making improvement for subsequent assignments. Interestingly, if taken on its own, this cognitivist approach represents a transmission view of assessment feedback (Nicol, 2010).

Until recently, the approaches taken to assessment feedback have remained focused on the transmission perspective as shifts in conceptions of teaching and learning within higher education have been slow to emerge (Beaumont, O'Doherty, & Shannon, 2011). However, due to the inconsistency in results concerning what students' perceive to constitute 'good' assignment feedback, the constructivist line of research questions how the feedback process is conceptualised and the role students take in that process (Sadler, 1998; Boud & Falchikov, 2007). Researchers in this area argue the need for students to be re-envisaged as active participants in constructing feedback information, generating it themselves and seeking it from many sources (Boud & Falchikov, 2007). This view understands that feedback delivery on its own does not lead to an improvement in student achievement. Rather, for

students to learn they need to actively do something with the information provided by their tutor, analyse the message, ask themselves questions, ask their tutor questions, discuss it with peers and use it to change their future decisions (Nicol, 2010). Thus, while the delivery and content of feedback comments tutors provide are important, it is the students' interaction with both the comments themselves and the tutor that provided them that is considered as more important (Nicol, 2010).

However, the socio-constructivist perspective taken in this review builds upon both approaches cited above, by going beyond the narrow focus on the input message or on the active role the student should take in constructing meaning from their feedback information. Together with other research (e.g. Ajjawi & Boud, 2015; Beaumont, O'Doherty, & Shannon, 2011; Carless, 2011; Nicol, 2010; Price, Handley, & Millar, 2011; Yang & Carless, 2013), this third approach proposes that assignment feedback should be conceptualised as a dialogic and two-way process dependent upon rich forms of student-tutor interaction to develop students ability to monitor, evaluate and regulate their learning. Taking this perspective, Nicol (2010) expressed:

> The many diverse expressions of dissatisfaction with written feedback can be interpreted as symptoms of impoverished and fractured dialogue. Mass higher education is squeezing out dialogue with the result that written feedback, which is essentially a monologue, is now having to carry out much if the burden of teacher-student interaction (p. 503).

At a fundamental level, researchers supportive of this emerging view draw on Vygotsky (1978) and social-constructionist interpretations of learning (e.g. Wells, 1999; Palinscar, 1998) by arguing that, to be useful, feedback must involve a rich communicative exchange between the student and the tutor, which triggers inner dialogue in the student's mind concerning disciplinary concepts (Nicol, 2010). This perspective holds that without establishing a rich form of dialogue within assignment feedback, it is hard to imagine how students would be able to produce meaning from a feedback interaction with their tutor and use this feedback consciously to improve their future work. Accordingly, this thesis understands feedback as "all dialogue to support learning in both formal and informal situations" (Askew & lodge, 2000, p. 1). The emphasis placed upon encouraging quality forms of communication between students and tutors is an explicit attempt to reduce the limitations of providing only *written* comments on end of course assignments (Nicol, 2010;

Yang & Careless, 2013). Consequently, this review aligns with dialogic notions of pedagogy (see Section 2.3 of this review), by understanding that when the rich communicative context of feedback is reinstated feedback may become more effective.

2.3 Feedback and the Emerging Pedagogic Rationale

2.3.1 Introducing Dialogic Pedagogy

A promising development discussed in recent literature (Carless et al., 2011; Nicol, 2010; Price, Handley, & Millar, 2011; Yang & Carless, 2013), and underpinning the current review, is the notion of dialogic approaches to assignment feedback in higher education. Such approaches are more widely encapsulated within the socio-constructivist theoretical underpinnings of dialogic pedagogy (Palinscar, 1998). As pedagogy may be defined as "the act of teaching together with ideas, values and collective histories which inform, shape and explain that act" (Alexander, 2008, p. 2), many different interpretations of this dialogic tradition have been put forward in the disciplines of literacy theory (e.g. Yakubinsky & Eskin, 1997 [1923]), social psychology (e.g. Vygotsky, 2004 [1934]) and linguistics (e.g. Bakhtin,1981 [1934-1935]). Considering this is a relatively new approach to be applied to assignment feedback in higher education (Nicol, 2010), this review first outlines the theoretical origins of dialogic pedagogy and later discusses how the literature, thus far, has adopted this theoretical lens to understand assessment feedback in higher education. It is important to note the debate in the literature concerning whether dialogism can be seen as a complete and self-consistent theoretical approach or whether it is a collection of individual perspectives which do not equate to an integrated whole (Brandist, 2002). Akin to others in this area (Skidmore & Murakami, 2016), this review argues the practice of dialogic pedagogy is strengthened when informed by an understanding of the key concepts developed in this school of thought.

2.3.2 What is Dialogism?

Fundamentally, dialogism is a philosophy of language that places central interest in socio-verbal interaction and the construction of interpersonal meaning between individuals (Skidmore & Murakami, 2016). It is most associated with the work of Mikhail Bakhtin (1895-1975) and other linguists who were members of the Bakhtinian Circle in the Soviet Union in the 1920s and 1930s. From this perspective, language is understood as a tool for

communication. Every instance of language use involves an address to another participant to fulfil the act of communication, whether to an individual directly in a face-to-face communication or indirectly in the reading of a book written by an unknown author (Skidmore & Murakami, 2016). Between these two extremes lies many degrees of intimacy, which characterise the different modes of speaking and different social settings (Skidmore & Murakami, 2016). It is upon this foundation that the notions of 'dialogic' and 'monologic' socio-verbal interaction are established.

Yakubinsky (Yakubinsky & Eskin, 1997 [1923]), a Russian linguist, first developed the concept of dialogic speech, and distinguished between monologue (such as a written text) and other types of speech (such as face-to-face conversation), which each hold different degrees of dialogicality. Such degrees of dialogicality, presented visually in the bottom horizontal quadrant of Figure 2.1, span from pure monologue to pure dialogue, with many degrees of dialogicality resting between these two ideals. In his article Yakubinsky highlights the properties of pure dialogic speech, for which an everyday face-to-face conversation is provided as the model. He shows how each degree of dialogicality contains a varying amount of non-verbal bodily movements and prosody emulating from the intensity, intonation and timbre of the speaker's voice, which he argued are crucial to convey emotional nuance and the individual's shade of meaning in an utterance. Yakubinsky proposed that it was these forms of non-verbal and prosodic emulates of dialogue that establish the quality of an individual's speech and determine the listener's likelihood of 'tuning into' the other speaker's utterance.

For Yakubinsky, dialogue is superior to monologue in the sense that it is a universal form of communication. As well as impressing the importance of non-verbal and prosodic emulates of dialogue, he also emphasises the naturalness of the linguistic features present in dialogue in contrast to the artificial nature of monologue. Specifically, dialogue is argued as more spontaneous in its form due to the shared time and space arising between the speaker and the listener, meaning that when speaking an individual's aim is to "say the *right thing* rather than to say the *thing right*" (Skidmore & Murakami, 2016, p. 20), i.e with the grammatical precision that is often found in written communication. For example, in an everyday face-to-face conversation an individual must provide their account in a reduced time frame, whereas in written communication an individual has time to edit and eloquently portray their opinion. As such, this process of editing accounts for the compositional and linguistic complexity of monologic, opposed to dialogic, modes of communication. From this, Yakubinsky connects monologue with social power and authority, and stresses the

creative potential of spoken communication for developing new ideas and creating connections between existing ideas (Skidmore & Murakami, 2016).

From the early work of Yakubinsky (Yakubinsky & Eskin, 1997 [1923]), the dichotomous relationship arising between monologic written texts and degrees of dialogic speech has been further explored within the disciplines of literacy theory and linguistics. Primarily, this relates to the speech-writing dichotomy explored in language variation studies, which identify variety-specific features of language through comparison of the lexico-grammatical choices employed (Biber, 1988; Halliday, 1985/1989; Tagg, 2009). Table 2.1, below outlines the main differences in the speech-writing dichotomy which are identified in the literature.

Speech	**Writing**
Dialogic	Monologic
Aural	Visual
Informal	Formal
Low social evaluation	High social evaluation
Shared knowledge between participants	Shared knowledge not assumed
Shared time and space	Separated in time and space
Interactional purpose	Ideational purpose
Unedited	Edited
Real time constraints	Fewer time constraints

Table 2.1 The speech-writing dichotomy (adapted from Tagg, 2009, p. 34)

Considering this, the dichotomy presents perceptions of speech as comprising of everyday conversation and writing as academic (Tagg, 2009). As such, many authors understand Yakubinsky's (Yakubinsky & Eskin, 1997[1923]) notion of 'pure' dialogue, represented through face-to-face conversation, as the founding form of language against which other varieties of language representation can be measured (Chafe, 1982; Chafe & Tannen, 1987; Crystal & Davy, 1969; Halliday, 1985/1989). Specifically, what is important is the significance of the above features (see Table 2.1) in shaping the lexico-grammatical features typically perceived in written and spoken language (Chafe, 1982; Chafe & Tannen, 1987; Halliday, 1985/1989). The main lexico-grammatical features of the speech-writing dichotomy are summarized in Table 2.2 below.

Speech	Writing
Non-fluency features such as hesitations, false starts, self-corrections, repetitions and fillers.	Lack of errors or visible self-corrections. Writing is more organised and structured than speech.
Dialogic in formulation (i.e. meaning may be negotiated) and the recognition of other speakers' value positions (Informed by Bakhtin, 1981 and Yakubinsky & Eskin, 1997 [1923])	Essentially monologic, making fewer references to other voices and viewpoints.
Use of hedging, as speakers pursue communicative goals with respect to a second party (Brazil 1995, p. 29)	Writing is often expression of content, rather than maintenance of social relations.
High frequency of personal pronouns (e.g. I, You, We)	The use of the passive construction
A high number of verbs	Nominalization
Everyday vocabulary that is often informal or colloquial in nature	More formal and topic specific vocabulary
Prosodic features such as intonation, stress, loudness	Graphic features such as punctuation, capitalisation and paragraphing

Table 2.2 Linguistic features of spoken and written language (adapted from Tagg, 2009, p. 34)

The identification of lexico-grammatical features that are specific to spoken and written language varieties, enables such distinctions to be encapsulated within spectral descriptions of language (Halliday, 1985) and dialogicality (Yakubinsky & Eskin, 1997[1923]). The proposition that types of language expression can be placed along a spectrum of spoken and written varieties according to situational variables, draws primarily on the work of Halliday (1985) and Biber (1988). In his analysis of the dichotomy between typical writing and speech situations, Biber (1988) identifies various dimensions placed on a scale along which to categorise language varieties. The scale dimensions outlined by Biber (1988), on a basic level, correspond to those linguistic features outlined in Table 1.1 and may provide empirical foundation for the distinctions between monologic and dialogic modes of communication originally conceptualised in the preliminary work of Yakubinsky and Eskin (1997[1923]). To provide an example, Figure 2.1 visually presents the degrees of dialogicality that may be found in classroom discourse. For example, the distinctions between the degrees of dialogicality helps us to recognise how a teacher led discussion will have many of the linguistic features of informal conversation, but is still framed by a definitive ideational purpose set by the teacher; thus, it may be considered a form of 'dialogic monologue'.

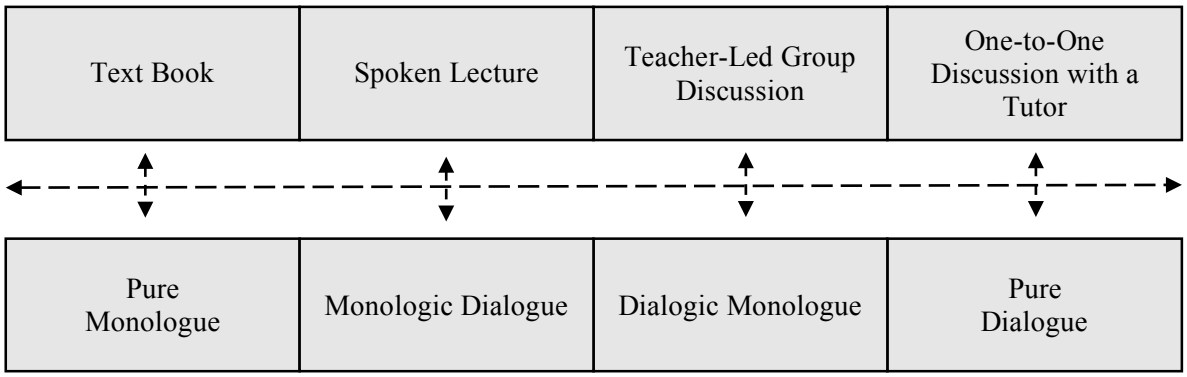

Figure 2.1 Degrees of dialogicality adapted to teaching discourse

Of further interest, the work of Halliday (1985) and partisans Martin and White (2005), focuses upon scaling the differences arising in the linguistic resources individuals employ in written and spoken communication to construct 'interpersonal' meaning, such as those used to express emotions, make normative assessments and embed authorial identities or personae in an utterance. By focusing upon the different social functions of written and spoken language, they begin to highlight the importance of situational factors in constructing interpersonal meaning in communication. Specifically, this research has recently prompted investigation on the impact of situational factors, such as technology, and the potential blurring of the distinctions between 'pure' dialogic forms of synchronous face-to-face spoken language and 'pure' monologic forms of distanced asynchronous written language (Baron, 1998b). For example, speech has been reported as mediated through technologies, such as the radio and voice mail messages, with corresponding effects on the degree of dialogicality associated with the language employed, caused by factors concerning the separation in time and space among speakers (Baron, 1998b).

2.3.3 Establishing the Relationship Between Speech and Consciousness

Upon defining dialogism and its associated features, many scholars (Voloshinov, 1973 [1929]; Vygotsky, 2004 [1934]; Bakhtin, 1981 [1934-1935]) placed emphasis upon understanding the relationship between dialogic speech and human consciousness. The most fully developed dialogic theory of language and consciousness is found in *Marxism and the Philosophy of Language* (Voloshinov, 1973 [1929]), which perceives individual consciousness as the product of social interaction mediated through speech, a view often likened to Vygotsky's in *Thinking and Speech* (Vygotsky, 2004 [1934]). He argues that an understanding of consciousness depends upon an understanding of semiotic signs, with language being the semiotic medium above all others. Voloshinov goes on to say that

discourse is a material phenomenon occurring through social activity, which allows consciousness to arise "in the material embodiment of signs" (Voloshinov, 1973 [1929], p. 11). Indeed, as interpreted by Skidmore and Murakami (2016), he perceives the spoken word as an essential accompaniment to all conscious activity:

> Individual consciousness is not the architect of the ideological super-structure, but only a tenant lodging in the social edifice of ideological signs (Voloshinov, 1973 [1929], p. 13).

From his emphasis on the social nature of language, Voloshinov makes further inferences concerning the nature of the mind. He suggests that our experiences of consciousness, should be considered as inner dialogue, as a continuous exchange between previously socially-encountered points of view. Consequently, meaning is generated though the exchange of spoken utterances between speakers and, similar to Yakubinsky (Yakubinsky & Eskin, 1997 [1923]), this is most obviously conveyed through tone of voice. Voloshinov's perspective leads him to comprehend the act of understanding another as dialogic in nature, being an active responsive process whereby an individual may attempt to match another's spoken utterance with their own 'counter utterance', whether this be in their inner dialogue or as a social utterance. In an analogy, he suggests meaning is appropriated within a social process by engaging with others in speech:

> Meaning is the effect of interaction between speaker and listener produced by the material of a particular sound complex. It is like an electric spark that occurs only when two different terminals are hooked together (Voloshinov, 1973 [1929], p. 102-103).

Voloshinov's theory of consciousness as inner dialogue resides closely to Vygotsky's views on mind as inner speech (Vygotsky, 2004 [1934]), though some suggest (Skidmore & Murakami, 2016) Voloshinov's theory impresses the dialogic nature of interaction and of consciousness more explicitly than does Vygotsky's. Rather, from a social psychological perspective, Vygotsky (2004 [1934]) stresses a general genetic law of development. He denotes importance to the centrality of language as a sign, which echoes Voloshinov's (1973 [1929]) thinking on the relationship between consciousness and speech. Here he states his primary account of the social in development:

> Every function in cultural development appears twice: first on the social level (interpsychological), and later, on the individual level (intrapsychological) … All higher functions originate as actual relations between human individuals (Vygotsky, 1978, p. 57).

Vygotsky (2004 [1934]) suggests that from face-to-face social dialogue with another, an individual may develop an 'internal social voice'. This he referred to as the Zone of Proximal Development (ZPD). Discussed in relation to assessment and instruction, he outlined how social dialogue may be internalised and enable a learner to virtually collaborate to solve a problem without the physical presence of the teacher/supportive other. However, Vygotsky's reference to virtual support develops important issues. As noted by Skidmore and Murakami (2016), if support given within the ZPD may originate from the social 'voice' of the absent tutor then surely there could be a place for several contrasting voices within an individual's ZPD. This leaves the need to consider different interpretations offered in the literature.

Cazden (1993) suggested that while Vygotsky (2004 [1934]) and Bakhtin (1981 [1934-1935]) had not heard of one another they shared a common intellectual milieu which provided a significant compatibility in their ideas. Bakhtin (1981 [1934-1935]) offers many reflections on the social nature of language and the process of psychological development. Bakhtin first coined the concepts of hetroglossia and polyphony, which in brief may be retrospectively understood as meaning different-languageness and many-voicedness (Vice, 1997). Hetroglossia refers to the 'social diversity of speech types' which may be geographical or socio-ideological in nature (Bakhtin, 1981 [1934-1935], p. 262). For example, there are certain ways of speaking in education that are 'part of the discipline', such as technical vocabularies in science subjects, where linguistic exchanges may significantly diverge from other settings. Here he suggests that speaking is a social act and to speak involves an encounter with standpoints other than our own. Akin to Vygotsky, Bakhtin suggests that it is through dialogue with others that our consciousness is developed. Similarly, Bakhtin explains that this consciousness is not a predetermined set of values provided to an individual via a social exchange, but rather it enables the individual to understand a new concept and become capable of deploying it to do their own thinking. Bakhtin writes:

> The word in language is half someone else's. It becomes 'one's own' only when the speaker populates it with his own intention, his own accent, when he appropriates the word, adapting it to his own semantic and expressive intention (Bakhtin, 1981 [1934-1935], p. 293).

Thus, it is only when an individual makes use of a new concept in constructing an argument, explaining their point of view, or actively questioning an interpretation of the concept put forward by another with their previous understandings, that they are integrating it into their own knowledge domain.

Bakhtin (1984 [1929]) introduces the concept of polyphony as the unmerged voices of individual speakers. His argument here holds strong similarities to Vygotsky's ZPD, in that speech with a learner develops what Bakhtin calls a 'micro-dialogue' (1984 [1929], p. 74), which represents an inner conversation between different voices, one representing the learners pre-existing 'voices' or knowledge and, the other being, the developed voice of the teacher. Yet, unlike Vygotsky, Bakhtin notes the 'difference of the other' whereby he rejects the notion of consensus (Skidmore and Murakami, 2016). As Cheyne and Tarulli commented:

> A dialogical mind does not itself constitute a common appreciative mass, but rather a community of different and often conflicting voices that may not be resolved into one comprehensive self….it is in the struggle with difference and misunderstanding that dialogue and thought are productive and that productivity is not necessarily measured in consensus (Cheyne & Tarulli, 1999, p. 89).

Here, returning to the issue of contrasting voices within an individual's ZPD, Bakhtin 1984 [1929]) offers the notion that it is only through difference and misunderstanding in dialogue, that the contradictions forming individual development are to be found. Vygotsky is primarily concerned with understanding the ZPD as a space whereby the learner is bought into the knowing or knowledge of another. Yet, the emphasis Bakhtin places on the multiple voices engaged in the construction and form of meaning, is to some extent a reasonable model of possible activity occurring within the ZPD (Skidmore & Murakami, 2016). If taking this Bakhtinian approach to understanding the ZPD, the learner is perceived as actively making decisions about what actions they must take to progress and the viewpoints they

themselves maintain. This position is perceived as being non-deterministic, as it sees learners as actively finding a way to progress in the understanding of what might be contradictory influences.

Of final consideration, the speculation on the nature of support provided within the ZPD develops further questions about the broader social influences. As noted by Skidmore and Murakami (2016), multiple and possibly conflicting social, cultural and historical voices may be interacting within any individual ZPD. When taking active decisions about viewpoints individuals themselves maintain, Wertch (1998) and others (Farmer, 1995), denote importance to the 'quality' of the voice, which they suggest always in some measure, enables the overpowering of other lesser voices in a ZPD. When defining quality of voice, Wertch (1998) refers to the original social characteristics of dialogic speech (e.g. prosody and lexico-grammatical features of speech, outlined further in Section 2.2.4 of this Chapter) and the relationship between the utterances and the contexts in which they occur. Here he explores ideas concerning knowledge that is not commonly held between speakers, about intersubjectivity, the medium of the utterance (e.g. textual or face-to-face), and how such factors help explain the extent to which speakers understand or fail to understand one another (Wertch, 1998). Akin to the work of Yakubinsky (Yakubinsky & Eskin, 1997 [1923]), Wertch recognises the importance of language features in understanding the workings of power and control in marginalising voices. Thus, by drawing upon linguistic theories, Wertch (1998) highlights how legitimacy of 'voice' is constructed through dialogic modality and referents associated with levels of intersubjectivity.

2.3.4 Dialogism and Education

The insights of dialogic theory, reviewed above, are important in developing educational practice. Fundamentally, dialogic theory perceives education as founded upon language and particularly on face-to-face spoken interaction occurring between educator and student (Skidmore and Murakami, 2016). Dialogism suggests educators need to adopt dialogic approaches to interaction with students if they are to encourage a process of deep psychological development that leads to an enhanced capacity for social activity, as opposed to encouraging a superficial accretion of new ideas that are not integrated into prior knowledge structures (Skidmore and Murakami, 2016). This acknowledgment of the social in dialogue, underlies the notion that in the dialogic classroom, educators and students should orient towards their interaction and discourse as 'unfinalised'. Thus, so long as the academic

course continues, which brings them together in an academic space (e.g. academic department in higher education), the final word has not yet been uttered, and there remains an opportunity for learners to approach educators to ask questions or experiment when employing a new concept or skill. Foundationally then, dialogic approaches place importance upon developing student–tutor relationships, which hold a genuine value by encouraging students to feel confident to seek and approach their tutor to engage in further reciprocal dialogue concerning a disciplinary concept or idea.

In consideration, the dialogic approach to pedagogy sees teaching and learning as a multi-layered process, whereby differential degrees of dialogic encounters help to engage both the educator and learner in a symbiotic process (Nicol, 2010). Such an ongoing discursive interaction between the educator and learner, aims to support and guide students in their fight to understand previously unknown concepts or material, with the ultimate goal of empowering them to appropriate new ideas to inform and develop their own practical thinking (Skidmore and Murakami, 2016). Notably, dialogic approaches to interaction occupy a transitional status, in that they are designed to assist students to accomplish the transition from understanding knowledge as authoritative and internally persuasive, to something that they can work and think with to generate meaning in their own conscious activity (Skidmore and Murakami, 2016). As such, dialogic approaches to pedagogy are often contrasted with the transition model of teaching and learning (Freire, 1993 [1970]), which places emphasis on stand-alone monological utterances issued by an authoritative educator, resulting in role of the leaner being limited to that of memorization, replication and the application of the provided information.

2.4 Reconceptualising Feedback as Dialogue

2.4.1 Introducing Dialogic and Monologic Feedback Methods

In the section above, the ways of making teaching and learning more effective in education have been explored based on dialogic approaches to pedagogy. Having established this more holistic framework, this review returns to examine assessment feedback in higher education from a dialogical perspective. Researchers supportive of adopting a dialogical view (Beaumont, O'Doherty, & Shannon, 2011; Carless, 2011; Nicol, 2010; Price, Handley, & Millar, 2011; Yang & Carless, 2013), argue the ways of making assessment feedback more effective in mass higher education should be explored based on the understanding that

feedback needs to be re-conceptualised as a dialogic process rather than as a transmitted monologue.

As higher education systems generally adopt a rather one-way transmission view of feedback (see Figure 2.2), with tutors making fragmented *final* and *written* comments on student's assignments, it is thought many of the issues and limitations outlined above (see Section 2.2.2) are likely to persist (Carless, 2011). Dialogic scholars (Carless, 2011; Price, Handley, & Millar, 2011; Yang & Carless, 2013) argue these issues stem from the *formal* and *monologic* nature of the written feedback method prominently used in higher education institutions. Firstly, there is a common belief that when assessors provide written comments to students these messages are easily decoded and transformed into action (Nicol & MacFarlane-Dick, 2006). Yet, there is evidence that these written messages are unvaryingly complex and easily misinterpreted by students (Higgins, Hartley & Skelton, 2001). Secondly, if feedback is exclusively the acquisition of written information, then it is difficult to understand how students can become actively involved and develop self-regulation skills that will aid them in their future learning (Boud, 2000). Thirdly, viewing feedback as purely a cognitive process involving the transfer of written information, overlooks the role of the students' motivational beliefs in processing feedback. Research suggests that negative beliefs can impact the beneficial effect of feedback comments and cause students to become disengaged in their learning (Garcia, 1995). This may be implied from findings, which suggest of those few students who do read their feedback, some find it impersonal, written in a way that is hard to understand, and difficult to use to improve their future work (Agius & Wilkinson, 2014). On this line of thought, Nicol (2010) argues that the expressions of dissatisfaction with written feedback in higher education are the direct result of employing monologic modes of teacher-student communication. Only when the dialogic nature of this communication is reinstated, will feedback become more effective (Nicol, 2010).

Figure 2.2 Transmission Feedback, with limited or brief comments which students find difficult to use to improve (adapted from Nortcliffe & Middleton, 2011, p.48)

Underpinning this position is the belief that adjusting feedback elements, such as timing and detail alone, is likely to be insufficient (Carless, 2011). What is required is a reconceptualization of the feedback process in higher education, by viewing feedback more as on-going dialogue then finalised information transmission through the development of dialogic feedback cycles (Beaumont, O'Doherty, & Shannon, 2008; Carless, 2011; Nicol, 2010). Some researchers draw upon the work of Yakubinsky (Yakubinsky & Eskin, 1997 [1923]) by envisaging dialogic feedback cycles to involve multiple exchanges, whereby a teacher interacts with a student who has less knowledge and understanding, using a variety of dialogically rich forms of socio-verbal communication (see Figure 2.3). These researchers also draw on Voloshinov (1973 [1929]), Vygotsky (2004 [1934]) and Bakhtin (1981 [1934-1935]) by assuming that higher 'quality' forms of dialogic utterances (see Wertch, 1998) will better trigger inner dialogue in students' minds concerning disciplinary ideas. As noted by Nicol (2010), without this inner dialogue, students would struggle to produce meaning from their feedback and use this to actively and consciously influence future action. Such inner dialogue is thought to involve students actively decoding the information discussed in their feedback, internalising it, using it to make judgements about their own work, and fundamentally, to make improvements in the future (Nicol, 2010). Taking this perspective, as in Nicol (2010), it is assumed that the overarching purpose of the feedback process in higher education is to aid students in developing their ability to self-regulate, monitor, and evaluate their own work and learning.

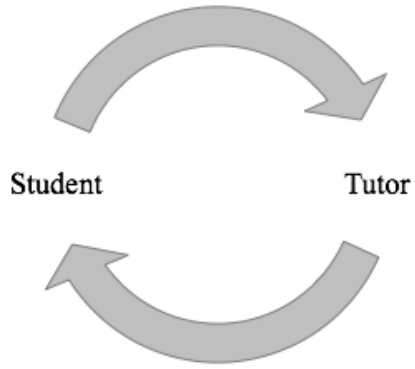

Figure 2.3 Dialogue feedback between assessor and student that is rich in communicative exchanges (adapted from Nortcliffe & Middleton, 2011, p.48)

In sum, the dialogical perspective argues that to be effective feedback must be embedded in rich forms of socio-verbal communication, to encourage students to interact with subject content and discuss it with others, in order to internalise meaning and make

strong connections to what they already know (Nicol & MacFarlane-Dick, 2006). Reinforcing this position is a conviction that the dialogic nature of feedback must be reinstated if higher education institutions are to overcome the variety of issues, which underlie student dissatisfaction with current written feedback practice (Carless, 2011). However, limited conceptual literature (Nicol & MacFarlane-Dick, 2006; Nicol, 2010; Yang & Carless, 2013) has attempted to practically examine how teachers in higher education might optimally construct the conditions for dialogic feedback, in order to promote students' productive learning. Importantly, such a conceptual framework would enable an analysis of the extent to which dialogic feedback and self-regulated learning are encouraged in a discipline (Yang & Carless, 2013).

2.4.2 A Framework for Enhancing Feedback Though Dialogue

In the current review, three prominent frameworks (Nicol & MacFarlane-Dick, 2006; Nicol, 2010; Yang & Carless, 2013) were identified, which broadly aim to outline the features of effective dialogic assessment feedback in higher education by reviewing, analysing and synthesising relevant literature. The earliest of these, developed by Nicol and Macfarlane-Dick (2006), outlines seven principles of 'good' feedback practice which support students' ability to self-regulate their own learning (see Table 2.3). Similarly, Nicol (2010) devises ten principles for effective dialogic commenting practice for tutors to implement in general feedback interactions in higher education (see Table 2.4).

Principles of 'Good' Feedback Practice
• Helps clarify what good performance is (goals, criteria, expected standards)
• Facilitates the development of self-assessment (reflection) in learning
• Delivers high-quality information to students about their learning
• Encourages positive motivational beliefs and self-esteem
• Provides opportunities to close the gap between current and desired performance
• Provides information to teachers that can be used to help shape teaching
• Encourages peer and tutor dialogue around learning

Table 2.3 Nicol & MacFarlane-Dick's (2006) Seven Principles of 'Good' Feedback Practice

However, the most recent framework is that proposed by Yang and Carless (2013), which suggests a 'feedback triangle' focused on the content of assessment feedback (*cognitive* dimension), the interpersonal negotiation of tutors' comments (*social-affective* dimension) and the organisation of feedback provision by assessors in higher education institutions (*structural* dimension). These authors note the interplay between these three

fundamental elements as central to the success of the feedback process (Yang & Carless, 2013). Like the previous frameworks proposed in the literature (Nicol & MacFarlane-Dick, 2006; Nicol, 2010), Yang and Carless (2013) derived from their analysis six features of optimal feedback practice, which they argue represent the "building blocks of an architecture of dialogic feedback" (p. 285). Notably, due to Yang and Carless' (2013) framework being founded on a more recent literature search, their process of reviewing, analysing and synthesising relevant literature included the previous works produced by both Nicol and Macfarlane-Dick (2006) and Nicol (2010) to formulate, what is perceived as, a more holistic, inclusive and complete framework for using dialogic feedback to foster productive student learning in higher education. For this reason, the framework proposed by Yang and Carless (2013) will hold the remaining focus in this review.

Principles of 'Effective' Feedback Commenting
• Understandable: *expressed in a language that students will easily understand*
• Selective: *commenting in reasonable detail on two or three things that students can do something about.*
• Specific: *Pinpointing to instances in the student's submission where the feedback applies*.
• Timely: *Provided in time to improve the next assignment*.
• Contextualised: *Framed with reference to learning outcomes/assessment criteria.*
• Non-Judgemental: *Descriptive rather than evaluate, focused on learning goals not just performance goals.*
• Balanced: *Pointing out the positive as well as areas in need of improvement*.
• Forward Looking: *Suggesting how students might improve subsequent assignments.*
• Transferable: *Focused on processes, skills and self-regulatory processes not just on knowledge content.*
• Personal: *Referring to what is already known about the student and their previous work.*

Table 2.4 Nicol's (2010) Ten Principles of 'Effective' Feedback Commenting Practice (p. 512-513)

2.4.3 The Architecture of Dialogic Feedback

Conceptual in nature, the framework proposed by Yang and Carless (2013) aims to answer the question of how dialogic feedback might be optimally constructed by teachers to encourage students productive learning. From reviewing the existing knowledge base on dialogic feedback practices in higher education, Yang and Carless (2013) categorised the emergent themes into three dimensions: cognitive, social-affective, and structural. At a basic level, Yang and Carless (2013) draw upon these dimensions, in suggesting the ability of an academic discipline to foster dialogic feedback is effected by the content of tutor feedback and the cognitive attributes that should be fostered through the feedback (the cognitive dimension). Similarly, the authors propose that the construction of dialogic feedback in a

discipline is also dependent upon how students and teachers relate to one-another and how they respond emotionally to their feedback or assessment process (the social affective dimension). Equally, the development and maintenance of dialogic feedback is thought to be effected by institutional policies, which decide how the process of feedback is arranged and what resources are used to provide feedback (the structural dimension).

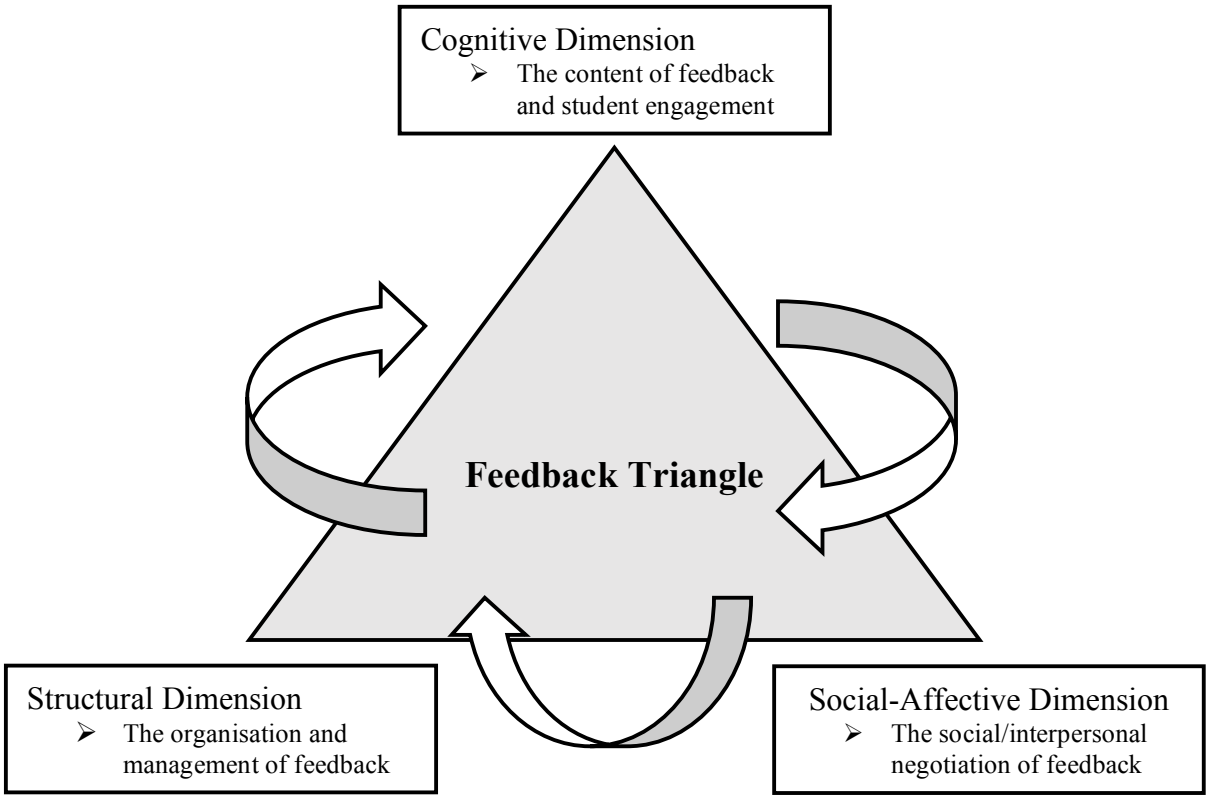

Figure 2.4 The Feedback Triangle (adapted from Yang & Carless 2013.p. 287)

Yang and Carless (2013) envisage the interplay between the dimensions as a feedback triangle (see Figure 2.4), whereby each dimension forms part of a feedback space. Importantly, the three dimensions interact in such a way which would result in the developments made in one dimension potentially supporting or undermining the actions in another. Accordingly, Yang and Carless (2013) suggest that the three dimensions need to be considered as a whole, in order to analyse the extent to which dialogic feedback is facilitated by teachers to encourage students productive learning. Thus, the contribution of this framework lies in the formulation of the three dimensions of dialogic feedback, which may then serve as an organisational devise used to chart the current dialogic status of feedback in any given institution. The discussion below further explores the literature pertaining to each

dimension, identifying the aspects that may impede or support dialogic feedback as noted by Yang & Carless (2013) and since extended beyond their original paper.

2.4.3.1 The Cognitive Dimension

By the cognitive dimension, Yang and Carless (2013) classify literature referring to the *quality* of feedback content given to students and its effect on a student's ability to actively adopt deep approaches to learning. While the quality of a tutor's discourse is impacted by the dialogicality of the utterance (i.e. its spoken or written nature, as discussed in Section 2.3.2 of this review) organised in the structural dimension of Yang and Carless' Framework (2013), it also rests on the content of the feedback itself. When focusing upon the content of feedback, the authors emphasis is placed upon the quality of a tutor's discussion of a technique, concept, or other aspect concerning the student's work, alongside the student's skills, attitudes or values (Yang & Carless, 2013). The content of a tutor's feedback is said to hold importance because it is in this discourse that core disciplinary concepts, methodologies and principles are shared (Ratcliff, 1997). Engagement with the disciplinary concepts embedded in tutor discourse, enables students to become confident to participate in disciplinary practice (Engle & Conant, 2002). As noted by Yang and Carless (2013), Nicol's (2010) work is exemplary in this area, indicating how the content of a tutor's comments may be constructed to promote dialogic feedback in ways that are not labour intensive (see Table 2.4).

High quality feedback content is thought to encourage students to take meaningful actions in tackling learning tasks (Nicol, 2010). Such meaningful actions include distinguishing key aspects of a problem, applying relevant skills and knowledge to assess it, and finding an appropriate solution (Bowden & Marton, 1998). Through this process, students are likely to use deep approaches to self-regulate their learning, which involves them self-evaluating the quality of their work in-progress based off past feedback interactions with their tutor (Hattie & Timperley, 2007). An essential attribute of self-regulative learning is the ability to be cue-conscious (Boekaerts, 2010). Cue-consciousness refers to a student's ability to recognise signals in their tutor's discourse about what is important in the academic discipline, such as what is required of them to obtain optimum results in the assessment process (Price, Handley, & Millar, 2011). The cue-deaf, coined by Miller and Parlett (1974), are thought to find written feedback to be too deeply encrypted, often including academic terminology without an understandable level depth of explanation. As noted by Yang & Carless (2013), encouraging a sensitivity to cues among students is an important stage in pedagogical literacy and the development of self-regulative skills (Nicol & MacFarlane-Dick,

2006). Considering its importance, some studies have attempted to systematically classify the depth and type of feedback comments made by tutors, so that the quality of feedback content can be evaluated (Brown & Glover, 2006).

In sum, within the cognitive dimension Yang & Carless (2013) suggest feedback needs to capture students' attention on how to approach disciplinary issues effectively, how to increase their ability to self-regulate, and how to utilise feedback productively. Feedback should guide students to apply knowledge and skills to address disciplinary problems and build their ability to assess the gap between current and desired performance (Yang & Carless, 2013).

2.4.3.2 The Social-Affective Dimension

In the social-affective dimension Yang and Carless (2013) discuss feedback as a social process, whereby the management of student-tutor relationships provides a source of emotions that may influence a student's way of studying. This dimension is focused upon understanding how feedback implies messages to students about their role in the learning environment and how students' emotions are employed in assessment tasks (Yang & Carless, 2013). Yang and Carless (2013) address literature which suggests an interaction of social affective aspects with a student's sense of identity (Higgins, Hartley, & Skelton, 2001), ability to self-regulate their own learning (Boekaerts, 2010), and level of engagement with their feedback (Price, Handley, & Millar, 2011).

Yang and Carless (2013) first note literature incorporated in this dimension, which highlights how feedback experiences can arise positive (e.g. pride or satisfaction) and/or negative (e.g. anger or anxiety) emotional reactions from students (Pekrun et al., 2002 as cited in Yang & Carless, 2013). While positive emotions are thought to promote self-regulation and strategies related to deep learning, negative emotions develop external regulation, such as heavy reliance on tutor guidance or peer support, and strategies related to surface learning (Pekrun, Goetz, Titz & Perry, 2002). Importantly, such negative emotional responses are associated with tutor comments that threaten a student's self-esteem or are perceived by a student to be of little use to improve their future work (Crossman, 2007). On the other hand, positive emotional responses are associated with teacher comments that show empathy to students concerning their assessment, rather than just direct forms of praise (Falchikov & Boud, 2007). By showing sensitivity to students' emotions within feedback, tutors are able to bridge the social distance occurring between themselves and their students and encourage students to trust in their commitment to help them improve their work

(Carless, 2009). However, Yang and Carless (2013) impress feedback should not be too 'soft'. While it can be difficult to achieve in practice, an appropriate balance is needed between support and critique in feedback (Yang & Carless, 2013).

Another area of literature identified by Yang and Carless (2013) in their framework, concerns how disciplinary cultures in higher education institutions contain an imbalance in teacher-student power relationships, which may hinder students from actively engaging in the feedback process (Boud, 2007; Hyatt, 2005). While power imbalances may appear inevitable in higher education when considering the tutors role as an assessor, Yang and Carless (2013) suggest it is how tutors position themselves in the discipline when interacting with students that is of key interest. Specifically, perceived unequal power relationships with tutors can cause students to feel socially distant and lose confidence in obtaining teacher feedback in face-to-face situations (Price, Handley, & Millar, 2011). This can lead to students 'faking good' (Gibbs, 2006), as they do not wish to approach tutors to clarify an issue for fear of being perceived as inadequate to study the disciplinary subject.

Extending beyond Yang & Carless' (2013) original paper, it may be implied from recent studies that the phenomena arising in this dimension may be more fully explicated when considering the dialogic perspective of interpersonal positioning (Evans, 2013; Varlander, 2008). This perspective understands assessment feedback as a form of evaluative language that fundamentally provides a basis from which to manage student-tutor relationships (Austin, 2016). Addressing the latter, evaluative language incorporates various linguistic resources to construct interpersonal meaning between participants (Martin & White, 2005). Specifically, this refers to how tutors express their emotions, make normative assessments and embed personae in the feedback they provide to their students (Austin, 2016; Hu & Choo, 2015). While samples and methodologies differ in research adopting this perspective, some studies (e.g. Austin, 2016; Hu & Choo, 2015; Mutch, 2003) have systematically analysed the role and function of evaluative language in written feedback, using a form of analysis inspired by Halliday's systemic functional linguistics (e.g. Martin & White, 2005). Predominantly, findings from this body of literature suggest that the teacher's position concerning the students whose work they asses, alongside the emotional and social relationship created between tutors and students, can be identified through the linguistic choices made in the written feedback comments provided.

In sum, within the social-affective dimension Yang and Carless (2013) suggest that feedback is most productive when experienced as social and relational process, whereby dialogic forms of interaction that occur in a trusting atmosphere will help encourage learner

agency and self-regulation. Importantly, Yang and Carless (2013) state that the management of emotions can build positive relationships, increase the active use of feedback and help stimulate positive dispositions around learning.

2.4.3.3 The Structural Dimension

By structural, Yang and Carless (2013) refer to the timing, sequencing and modes of feedback, alongside the technological resources used to provide feedback. Primarily, this dimension relates to how feedback processes are organised within institutions and subsequently managed by teachers (Yang & Carless, 2013). Emphasis is placed upon how structural restraints, such as modularised programs, increasing student numbers and the intensification of staff workloads, can impede teachers from participating in dialogic feedback practices.

Flexibility of assessment and feedback type is first discussed as holding importance in this dimension (Yang & Carless, 2013). Flexibility is thought to be dependent upon both the timing and mode of feedback. Concerning the timing of feedback, Yang and Carless (2013) suggest that feedback should be understood as a communicative and responsive action, which if arrives too late, is unlikely to be responded to or acted upon. However, feedback that is provided too soon after a student submits an assignment that caused them difficulty may, however, discourage independent judgement that is needed for effective self-regulated learning (Sadler, 2010). Yang and Carless (2013) also identify literature suggesting the importance of task design as a factor impacting timing and uptake of feedback. Generally, integrated multi-stage assessment types help to encourage timely comments and student use of feedback within iterative feedback cycles (Gibbs, 2006).

Important for this review, discussion regarding the modality of feedback heavily relates to the dialogicality of the tutor's chosen method of discourse (i.e. its spoken nature, as discussed in Section 2.3.2 of this chapter). Specifically, in their framework Yang and Carless (2013) empress how face-to-face verbal feedback provides high quality tutor discourse that can most flexibly accommodate a student's needs, as it can allow for the negotiation of meaning and develop relationships between students and tutors. However, the authors do note, due to structural restraints currently emplaced upon tutors in higher education, written feedback is often the predominantly used modality in most disciplines as tutors often struggle in these environments to engineer this kind of spoken face-to-face feedback interaction (Yang & Carless, 2013). Despite this, written feedback is thought to have some benefits, as it can allow students to flexibly re-engage with its content over time (Yang & Carless, 2013).

From this, Yang and Carless (2013) suggest some of the structural barriers to feedback provision may be mitigated by re-engineering the feedback process. Here the mobilisation of disciplinary and non-disciplinary resources is discussed (Engle & Conant, 2002). Disciplinary resources are learning tools which embody the practices of the discipline, such as a senior-year student providing tips to a first-year student (Topping, 2005). While, non-disciplinary resources are learning tools relevant to all disciplines, which are increasingly being characterised as new technologies, rather than traditional media, such as encyclopaedias and dictionaries (Yang & Carless, 2013). Specifically, Yang & Carless (2013) stress the developments in the literature pertaining to the use of podcasting to facilitate verbal feedback in MP3 format, which they suggest may help reinstate an increasingly dialogic form of tutor discourse during feedback interactions. The authors note how this technology may have the potential to allow more detailed and nuanced feedback (cognitive dimension), and encourage students' perceptions of their tutor as caring about their academic development (social-affective dimension).

In sum, Yang and Carless (2013) emphasise in the structural dimension how the barriers preventing dialogic feedback arise from the policies and practices of universities. Ideally, institutions would provide adequate human and material assets to overcome these restraints. However, when these resources are not available, it is argued the situation may be mitigated by the use of technological tools and devices, which may encourage increasingly dialogic forms of student-tutor interaction (Yang & Carless, 2013). Accordingly, Yang and Carless (2013) argue the effective use of technology may help to alleviate some of the challenges noted within the structural dimension, create further opportunities for collective and individual reflection, encourage multi-modal and multi-agent feedback, and make feedback a process that is beyond the spatial and temporal confinements of the classroom.

2.4.3.4 The Six Features of Dialogic Feedback

From their analysis of the literature arising within the three dimensions, Yang and Carless (2013) propose an architecture of dialogic feedback as represented in Figure 2.5. The block at the top of the figure signifies the cognitive dimension, whereby the authors argue the content of feedback and the dialogicality of the communication as the most important factors in developing a student's learning. Considering this, Yang and Carless (2013) understand both the social-affective and structural dimensions as building blocks used to support the content of feedback, in the sense that its substance may be discarded if social and organisational factors are not emplaced effectively. Enhancement of feedback processes in

one dimension often means parallel changes in the other dimensions (Yang & Carless, 2013). To illustrate this interplay, a simple example may be given. Students actively making use of tutor feedback to regulate their progress (cognitive dimension) and the development of trusting relationships between participants (social affective dimension) can be encouraged by technological resources (structural dimension), such as virtual learning environments, which have been found to create a space for collaborative knowledge exploration between learners and tutors (Blair, Wyburn-Powell, Goodwin, & Shields, 2014).

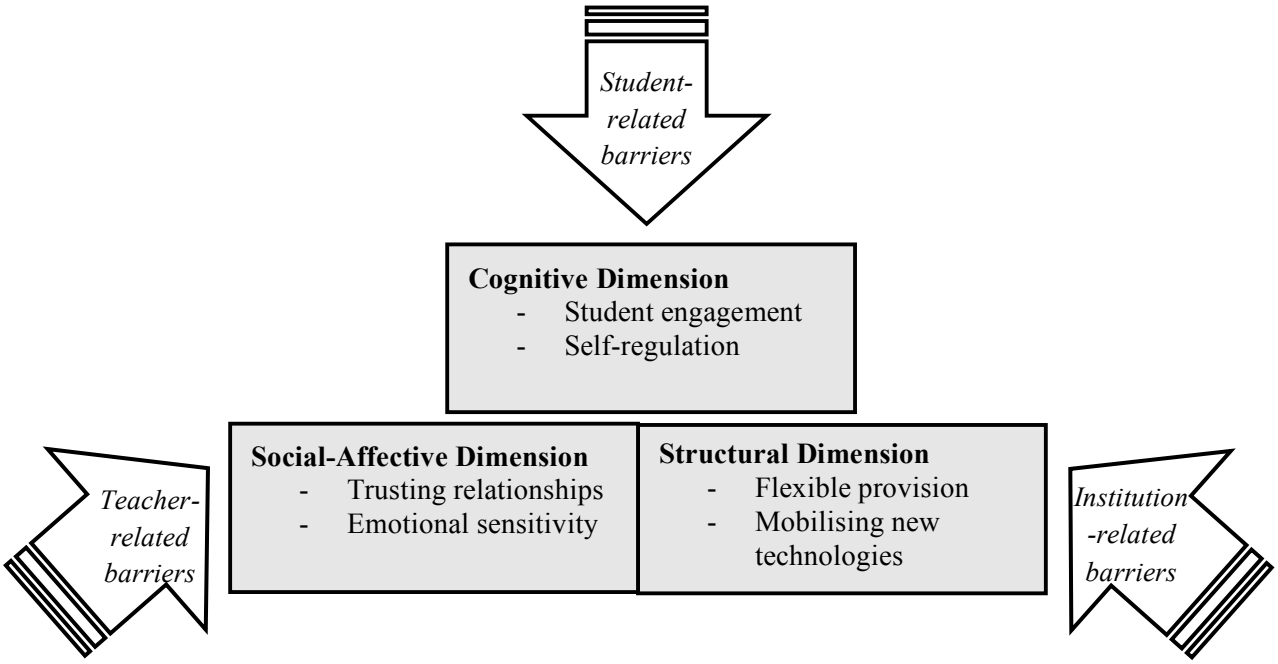

Figure 2.5 The Architecture of Dialogic Feedback (adapted from Yang & Carless 2013.p. 293)

Derived from the architecture of dialogic feedback, Yang and Carless (2013) conclusively propose six key features of feedback practice, which are presented in Table 2.5 and abbreviated in Figure 2.5. In outlining these features, the authors acknowledge the barriers to implementation at institutional level. As alluded to above in previous sections of this review, various challenges may prevent the realisation of dialogic feedback in a discipline. Such barriers to effective feedback are summarized in Figure 2.5. These three sets of barriers relate to institutional resources, teachers' priorities and workloads, and students' lack of engagement in the feedback process.

Features of 'Effective' Dialogic Feedback
1. Stimulating student engagement with disciplinary problems through dialogic feedback;
2. Developing student self-regulation through inducting students to the multiple purposes of feedback and their active role in generating, processing and using feedback;
3. Nurturing collaborative and mutually trusting teacher student and peer relationships;
4. Showing sensitivity to student's emotional responses and psychological needs;
5. Being flexible in the provision, timing, forms and sequencing of feedback, to facilitate student uptake;
6. Mobilising disciplinary and non-disciplinary resources for feedback provision, especially new technologies.

Table 2.5 Features of 'Effective' Dialogic Feedback (Yang & Carless 2013.p. 293)

Overall, Yang and Carless (2013) propose a holistic framework that seeks to analyse feedback processes coherently, so to understand the extent to which dialogic feedback is fostered in a discipline. Importantly, this framework allows for clarity in outlining future research directions, which may now be categorised into each of the three dimensions (Yang & Carless, 2013). Yang and Carless (2013) impress the rewarding outputs that may arise from research focusing upon innovative methods of technology enhanced feedback within the structural dimension. Utilising new technologies is believed to be the most feasible method to stimulate and facilitate dialogic feedback in the discipline, when considering the current challenges posed by the massification of higher education (Yang & Carless, 2013; Nicol, 2010; Ajjawi & Boud, 2015). However, the central element here is not the technology (structural dimension) itself, but its role in advancing active student learning (cognitive dimension) and trusting student-tutor relations (social-affective dimension). Ultimately, research addressing this area must consider the central question: "Under what circumstances does technology-enhanced feedback serve as a facilitator for effective feedback and when is the technology as much as a distraction as an asset?" (Yang & Carless, 2013. p.275).

2.5 Exploring the Dialogic Potential of Audio Technology

2.5.1 Introducing Audio Technology Within the Framework for Dialogic Feedback

There is growing use of technology to assist assessment feedback processes in higher education. The use of technology is thought to impact upon the nature and communication of feedback as well as how student receive it (Hepplestone, Holden, Irwin, Parkin & Thorpe, 2011). Audio feedback is one technologically assisted method that has become more popular in recent years, yet evaluating its role in the feedback process is still an emerging area of research (Hennessy & Forrester, 2014). Audio feedback may be defined as a digital MP3

sound file containing formative or summative, spoken feedback given by a tutor (Hennessy & Forrester, 2014). Previously, audio feedback was emailed to students directly in MP3 file format (Lunt & Curran, 2010). However, audio feedback has since been integrated into the online grading platform Turnitin Grademark©, which allows assessors to add a voice comment of up to three minutes long as a feedback summary (Turnitin, 2018a).

The emergent dialogic pedagogical rationale for feedback in higher education, argues that for feedback to be effective it needs to be embedded in in rich forms of socio-verbal communication in order to encourage students to interact with the subject content and discuss it with others (Yang & Carless, 2010). Upon devising a framework for dialogic feedback, Yang and Carless (2013) and Nicol (2010) both hold interest in the practical potential of the audio technology as a facilitator for effective feedback in higher education. Primarily, this interest is held due to the critiques of written tutor comments, which contend that because written feedback interactions occur in a disembodied and pure *monologic* form, a lack of paralinguistic features and nuance of voice leads to a loss of meaning (see Figure 2.1 in Section 2.3.2). As such, these authors postulate that if tutors create spoken comments via an MP3 recording, this technological platform may help recreate a sufficiently *dialogic* and rich form of communication that Voloshinov (1973 [1929]) and other social constructionists (e.g. Vygotsky, 2004) described as necessary to construct knowledge and effective learning. In application to the more recent framework proposed by Yang & Carless (2013), the potential of the audio technology may be characterised within the three dimensions of dialogic feedback. Here the authors note further research is needed in understanding the role of audio technology (structural dimension) in advancing active student learning (cognitive dimension) and trusting student-tutor relations (social-affective dimension).

While there is a growing body of literature on the advantages of using this technology, very few studies (see Nortcliffe & Middleton, 2011) have directly attempted to analyse the potential of this technology grounded in pedagogic theory. Nonetheless, this literature provides useful guidance to assist in addressing some of the current 'problems' (as identified above in Section 2.2) with written feedback practice, inadvertently implying audio feedback may go some way to reinstate the dialogic context of feedback in higher education (Nicol, 2010). Consequently, the remainder of this review utilises the framework developed by Yang & Carless (2013), as an organisational devise so to chart the literature pertaining to audio feedback, in light of dialogic approaches to pedagogy. Such a review will allow for an assessment of the findings presented in the current literature, concerning the extent to which audio technology may facilitate effective and dialogic feedback in the discipline.

2.5.2 Structural Implications of Providing Audio Feedback

When outlining the structural dimension, Yang and Carless (2013) place importance upon the timing, sequencing and modes of feedback, as well as the potential of utilising technology enhanced feedback methods, to overcome the institutional barriers that prevent dialogic feedback in the discipline. There have been a number of large scale projects in the UK, which have sought to understand how audio feedback may be practically used to overcome many of the problems outlined in the NSS survey results on student feedback. For example, the *Sounds Good* project endeavoured to determine the practicalities of using audio feedback, such as how to flexibly implement the technology to accommodate student needs and save staff time (Rotheram, 2009). This project and others similar (e.g. Stewart, 2008) have encouraged several small-scale case studies published by the Higher Education Academy, predominantly looking at staff and student perceptions of the practicalities afforded by the use of digital audio feedback in the current climate of mass higher education.

While several of these UK based case studies report that the use of audio feedback reduces the time tutors spend providing comments significantly with larger cohorts (Stewart & Doolan, 2008), others have reported that the process of marking took longer than when using the standard written feedback method (Stockwell, 2009). However, larger scale American studies that compare audio and written feedback have reported using the former reduces tutor time required to mark assignments by "approximately 75%" and that this "reduction in time was coupled with a 255% increase in the quantity of the feedback provided" (Ice, Curtis, Phillips, & Wells, 2007, p. 19). To further understand why this may be the case, Lunt and Curran (2010) found that one minute of audio equates to six minutes of writing, which suggests it may be the naturalness of speech that reduces the time spent by tutors when providing audio feedback. Despite these findings, the field is still inconclusive in this area. Such inconsistencies in findings may be put down to a number of factors, not least the differences in *length* of the recordings. Problematically, this issue is difficult to address as most studies do not specify the average length of the audio feedback provided by tutors (Dixon, 2015).

Differences also arise in findings concerning the time tutors spend giving comments due to the mode of feedback provided to students. While some studies deliver audio feedback as an *alternative* to written feedback (McGarvey & Haxton, 2011), the majority of studies focus upon a *blended* approach, pairing traditional written annotation of a student's assignment with an audio file containing a summary of the student's overall feedback (Emery

& Atkinson, 2009). While blended feedback often takes longer to produce for tutors, students often report a preference for this approach as they feel they benefit from listening to their audio recording while simultaneously reading annotated comments on their assignment (King McGugan, & Bunyan, 2008; Olesova & Richardson, 2011). Similarly, while it is recognised the delivery of this technology does not replace reciprocal face-to-face dialogue with a tutor (McGarvey & Haxton, 2011), studies show how the use of audio allows students to "receive dialogue in privacy, enabling them to respond to their feedback in different ways and at different times" (Hepplesone et al., 2011, p. 120). The issues concerning the blended approach to feedback is discussed further in section 2.5.3 of this review.

Disparities in the software used to deliver audio feedback has also caused issues concerning widespread implementation across higher education institutions (Stockwell, 2009). While this is a little addressed concern, Chiang (2009) highlights the two most common methods of delivering audio feedback to students. Here she suggests the practicality of emailed MP3 recordings when giving feedback on non-electronically submitted posters and presentations, whereas embedded audio files within PDF files or Microsoft Word documents are best used for electronically submitted assignments. However, with increased use of online learning environments, it may be assumed many tutors now utilise institutional virtual learning environment (VLE) tools for providing audio feedback to students (Dixon, 2015). The most commonly used online grading system in UK higher education institutions is Turnitin Grademark©, which recently implemented an inbuilt voice comment tool that records the tutor speaking their feedback for up to three minutes (Turnitin, 2018a). Yet, less research appears to have been conducted applied to this new platform of delivery.

2.5.3 Cognitive Implications of Providing Audio Feedback

By the cognitive dimension, Yang and Carless (2013) discuss the quality of feedback content provided to students and its impact on a student's ability to actively adopt deep approaches to learning and become a self-regulative learner. While recognising the potential 'halo effect' surrounding the novelty of using audio feedback (Lunt & Curran, 2010), there is widespread agreement in the literature on its possible ability to improve learning in higher education.

Within this literature there is consensus that audio feedback may help to alleviate what Gibbs and Simpson (2004) outline as the communication failures that commonly occur in written feedback; for example, research findings have suggested how the audio modality allows for a "high occurrence of elaboration and exemplification" (Nortcliffe & Middleton,

2011, p. 3). Focusing upon the perceived quality of content, often studies report that in comparison to written comments, students find audio comments clearer (Roberts, 2008) and often provide strategies for solving issues founded within students work, rather than just stating what these issues are (Rotherham, 2008; Merry & Orsmond, 2008). Similarly, tutors have also reported feeling as though they could offer higher quality and more detailed feedback to students through using audio, rather than written feedback (Swan, Dagen, Matter, Rinehart & Ice, 2008). Research conducted in this area is primarily driven by case studies, whereby surveys and/or interviews are carried out with students and/or tutors, so to ascertain an understanding of the opinions circling the use of audio technology (i.e Ice, Curtis, Phillips & Wells, 2007). Rather than relying on individual opinion, some researchers (e.g. Brown & Glover, 2006) argue attempts need to be made to systematically classify the different types of comments that tutors provide, so that the quality of feedback can be more accurately evaluated.

Meanwhile, although there is some disagreement in the literature on the potential of audio feedback to improve student achievement (Nortcliffe & Middleton, 2009; Rockinson-Szapkiw, 2012; Morris & Chikwa, 2016), the majority of studies highlight its ability to significantly enhance students' engagement and active use of their feedback (McGarvey & Haxton, 2011). Reports of increased levels of engagement with audio feedback, at a baseline, may be perceived from common findings which suggest students are significantly more likely to open their audio feedback than their written feedback (Lunt & Curran, 2010). Other recurring themes relate to students believing speech to be a richer medium than written text (Rotheram, 2009). Here Ice, Curtis, Phillips and Wells (2007) suggest that students feel they engage and retain material better when they receive it in audio format, due to the confirmation of meaning that is conveyed through the immediacy, fluidity and nuance that speech provides. Similarly, Rockinson-Szapkiw (2012) claims that students express that they engage and process audio material more efficiently than that of text. Not only do students retain material better when they receive audio feedback, but they also apply that content in more cognitively complex ways in the future (Ice, Curtis, Phillips & Wells, 2007). This relates to reports that aural feedback appears to be effective at enabling students to feedforward their tutor's comments to enhance their future work (Gleaves & Walker, 2013). However, this finding has received some inconsistent support within the wider literature (Morris & Chikwa, 2016).

As outlined when discussing the structural implications of providing audio feedback, there is an argument that students prefer a blend of audio and text based feedback, rather than

just audio feedback on their assignment (Ice, Swan, Diaz, Kupczynski, & Swan-Dagen, 2010; Merry & Orsomnd, 2008; Oomen-Early & Gallien, 2008). While Merry & Orsmond (2008) argue that students utilise audio feedback in different and more meaningful ways than written feedback, other studies report that students feel they benefit from listening to their audio comments while simultaneously reading annotated comments on their assignment (Olesova & Richardson, 2011). While students often report a preference for blended feedback, little focus has been awarded to explicating the cognitive differences and/or benefits of receiving a *blend* of audio and written feedback on an assignment, as opposed to receiving audio feedback as an *alternative* to written comments (Dixon, 2015). More research needs to be done in this area to explore whether it is the case of students perceiving 'more as better', or if a blended approach holds the ability to further improve learning in higher education.

2.5.4 Social-Affective Implications of Providing Audio Feedback

Within the social-affective dimension, Yang and Carless (2013) discuss feedback as a social process whereby the management of relationships embodies a source of emotions, which may significantly affect a student's ability to self-regulate their own learning. As highlighted by Varlander (2008) research focusing upon the social and emotional elements of feedback is sparse. Within the literature, there is a small yet growing body of evidence which suggests that the use of audio feedback on student assignments facilitates a more meaningful and personal relationship between tutor and student (ice, Curtis, Phillips, & Wells, 2007; Dagen, Mader, Rinehart, & Ice, 2008; Bond, 2009; Wood, Moskovitz & Valiga, 2011) and that students prefer this individual method (Nortcliffe & Middleton, 2011).

As highlighted by Rowe (2011), students "look to feedback as a means of satisfying a need for personal contact and emotional support" (p.347). Reports suggest that through the use of audio feedback, students perceive their tutors to care more about their work, their learning (Merry & Orsmond, 2008) and about *them* (Ice, Curtis, Phillips, & Wells, 2007), as it is a "less superficial" (Sipple, 2007, p. 26) form of communication. From this, other studies report how care, emotional sensitivity and personal connectivity are communicated through the use of spoken language, including the nuance and intonation of voice (Nortcliffe & Middleton, 2011; Rockinson-Szapkiw, 2012), something which is difficult to achieve with written or textual methods. Indeed, Gleaves and Walker (2013) stress how the affordance of voice in audio feedback can have a positive effect on a student's experience in a discipline, with one respondent stating, "I could hear you smiling" (p.205).

As well as the use of voice, some studies (Sipple, 2007; King, McGugan, & Bunyan, 2008) indicate that the specific linguistic resources employed by tutors when providing audio feedback may differ to those used in traditional textual feedback, to have a more positive impact on tutor-student interpersonal positioning and student emotions (see Section 2.4.3.2). King, McGugan, & Bunyan (2008) highlight from their interviews with tutors, how the spoken nature of the technology reminded the tutor that someone would be listening to their feedback, which then influenced their choice of wording when phrasing criticism so to be less harsh. This may correspond with findings from Sipple (2007), as students found that receiving audio comments, even for challenging papers, made them feel more confident in their writing because they "provided more genuine and frequent praise" (Sipple, 2007, p. 24). Yet, as with studies focusing upon the *content* of feedback, most research conducted in this area is primarily driven by student/tutor surveys and/or interviews to gain an understanding of the opinions circling the emotional context of audio feedback (e.g. Merry & Orsmond, 2008; Ice, Curtis, Phillips, & Wells, 2007). Opposingly, some researchers (e.g. Austin, 2016) argue attempts need to be made to systematically identify the potential impact of providing spoken *audio*, as opposed to *written*, feedback on the use of evaluative language by tutors in their comments and the emotional role and function those choices may have for students, by using analysis inspired by Halliday's systemic functional linguistics (e.g. Martin & White, 2005). Such interest rests heavily on the distinctions of the speech-writing dichotomy, discussed previously in this review (see Section 2.3.2).

2.6 Statement of Research Questions

This literature review has examined the practice of assignment feedback in higher education institutions and identifies the many issues currently imposed upon students and tutors by the written or textual method of feedback provision. Aiming to overcome such issues, there is clear argument in the literature for the need to focus more attention on the *rapport* of feedback (Brown & Glover, 2006), to build an understanding of feedback as a process of rich *dialogic* communication, rather than as a transmitted *monologic* event (Higgins, Hartley, & Skelton, 2001); whereby epistemologically, meaning is dependent upon the process of communication itself (Dixon, 2015). Such a call for the reframing of feedback practice holds a strong focus on *how* feedback is *communicated*, by assuming that for feedback to be effective it needs to be embedded in higher 'quality' forms of dialogic utterances (see Section 2.3.2), which will encourage a student's productive learning and the development of trusting teacher and student relationships (Yang and Carless, 2013). Considering this focus, the many

diverse expressions of dissatisfaction with written feedback in higher education are interpreted within in the literature as direct symptoms of employing only *monologic* modes of teacher-student communication (Nicol, 2010). In an increasingly challenging higher education context, Yang and Carless (2013) aim to reinstate the dialogic context of feedback practice by impressing the rewarding outputs that may arise from research focusing upon innovative technology enhanced feedback methods.

Within recent conceptual papers, some authors (Nicol, 2010; Yang & Carless, 2013) hypothesize that the utilization of audio technology to provide feedback may recreate a sufficiently *dialogic* and rich form of communication, involving nuance of voice and paralinguistic features, that dialogic theorists (e.g. Vygotsky, 2004) describe as necessary to construct effective disciplinary learning. Yet, despite such claims, there is a lack of studies in the literature that have *directly* analysed the potential of this method of technology enhanced feedback grounded in pedagogic theory (Nortcliffe & Middleton, 2011). Further empirical data grounded in theory is needed to support and extend upon what previous studies have found, while providing a clear pedagogic rationale. This literature review has, on this basis, attempted to chart the literature pertaining to audio feedback, within the central three-factor framework for dialogic feedback developed by Yang & Carless (2013). Such a framing was implemented as an organizational devise to chart current and future directions in research, which can then be used to assess how far the audio technology may help facilitate effective dialogic feedback in the discipline.

Empirical research into audio feedback overarchingly suggests the promising potential of this technological medium to help fulfil the four features of effective dialogic feedback (see Table 2.5), which stem from the cognitive and social-affective dimensions of Yang and Carless' (2013) framework. Yet, research highlighting the merits of providing audio feedback is primarily driven by relatively small-scale case studies (e.g. Carless, 2006; Glover, 2004; Merry & Orsmond, 2008), which assess a limited sample of students or teachers and their perceptions of this new technology through conducting surveys and/or interviews. While it must be acknowledged that such mixed methodologies help to capture the "humanness of human respondents" (Dixon, 2015. p.102) they fail somewhat to *fully* capture the *experiences* of those who engage with this technology; what Livingstone (2012) identifies as "*what* is really going on, how can this be explained, and how could things be otherwise?" (p. 9). Indeed, so to further unpick the potential *dialogic nature* of '*what*' is truly provided to students when producing feedback using audio technology, more systematic analysis of teacher feedback comments, in and of themselves, needs to occur (Austin, 2016;

Brown & Glover, 2006). Further comparative research is required on '*what'* tutors say when providing feedback (i.e. type and depth of comment) and '*how*' they say it (i.e. use of evaluative language), so to understand the *foundational* communicative role and function assignment feedback may serve for students. At a baseline, such research would provide further understanding of *why* and *how* the modality (written/audio) used to provide feedback, may hold impact upon the dialogic nature of *what* feedback tutors provide to students on their assignment.

However, while further comparative research is required in this area, it is believed little progression can be made before taking into consideration the inconsistencies in the implementation of the audio technology, noted when reviewing the literature pertaining to the structural dimension of Yang and Carless' (2013) framework. Inconsistencies evident in the reviewed literature primarily concern the *length* of the audio recording made by the teacher, the use of *blended* as opposed to *alternative* methods of audio feedback, and disparities in the *software* used to deliver audio feedback to students (see Section 2.5.2). Owing to the interplay between the three dimensions, any changes in the way that audio feedback is provided to a student that are charted in the *structural* dimension, may potentially support or undermine the consequent actions reported in both the cognitive and social-affective dimensions (Yang & Carless, 2013). Consequently, it is believed that the use of audio feedback by tutors in higher education needs to be *standardized,* to produce a more *generalizable* assessment of the extent to which effective dialogic feedback is facilitated in any given discipline using this technological medium. As such, more knowledge is required that focuses on the voice commenting tool recently integrated into the online grading platform Turnitin Grademark©, which is currently the most widely used E-Learning platform in UK higher education institutions (Turnitin, 2018a). Specifically, the voice commenting tool on Turnitin Grademark© will allow for the standardization of key structural elements pertinent to the feedback process. This is as Turnitin Grademark© not only restricts the audio recording time to three minutes the length, but also allows for a blended approach to audio commenting, and provides a standardized virtual platform for all students to similarly access their audio recording (Turnitin, 2018a).

Based on the identified knowledge gaps in the literature review, this study holds interest upon assessing the extent to which audio recorded feedback, provided using the technological platform Turnitin Grademark©, may facilitate effective dialogic feedback in higher education institutions. As stressed by Yang and Carless (2013) when outlining their framework for dialogic feedback, the three dimensions need to be considered as a *whole* to

effectively analyse the extent to which dialogic feedback is fostered by any technologically enhanced medium. Consequently, further empirical data, grounded in each of the three dimensions of dialogic feedback (Yang & Carless, 2013), is needed so to confirm and extend what previous studies have found in application to audio feedback. In order to capture a more *complete* and *holistic* understanding of the *experiences* of those involved in receiving feedback though this technological medium, the reviewed literature strongly suggests the want for both comparative analysis of *what* feedback tutors provide to students on their assignment (Austin, 2016; Brown & Glover, 2006), alongside an analysis of how students *themselves* feel they receive and interact with such comments (Dixon, 2015). Based on the identified knowledge gaps in the literature review, the overarching research question for this study is:

Compared to using traditional methods of written feedback, how far might providing assessment feedback to students using audio recording technology serve as a facilitator of effective dialogic feedback in higher education?

Four underlying research questions were derived from the overarching question:

1. **How far might the provision of assessment feedback to students using audio recording technology encourage the cognitive features of dialogic feedback, when compared to written feedback?**

2. **How far might the provision of assessment feedback to students using audio recording technology encourage the positive social-affective features of dialogic feedback, when compared to written feedback?**

3. **How might the provision of assessment feedback to students using audio recording technology encourage the structural features of dialogic feedback, when compared to written feedback?**

4. **How might the research findings have real world application when applied to improve feedback practice in higher education?**

These research questions suggest the need to analyse and compare the written method of feedback delivery with the technologically assisted method of audio feedback, to ascertain the potential differences in the *experiences* of those involved in the feedback process. The next chapter suggests a research methodology, design and procedures to address the above overarching and sub-research questions.

3 RESEARCH PARADIGM, THEORETICAL FRAMEWORK AND PROJECT DESIGN

3.1 Introduction

The previous chapter identified knowledge gaps and research questions to explore the dialogic potential of providing audio as opposed to written feedback on students' assignments in higher education. This chapter reviews the research paradigm for the study and justifies the selection of a mixed methods design for the research. After an overview of research paradigms, the application of the pragmatic paradigm for this project is discussed. This chapter also outlines Yang and Carless' (2013) framework for dialogic feedback as the underlying theoretical framework used to situate the study. The selection and definition of a mixed method explanatory sequential design is then provided. The methods used in the design are articulated, highlighting the need to have four data collection phases so to address each element of the theoretical framework. Specifically, this outlines the collection of quantitative data for a twofold analysis of tutor feedback scripts and a student survey, which is then further developed via qualitative interviews with students. Finally, this chapter explains how the methodological design will inform the structure of the subsequent chapters included within this thesis.

3.2 Selection of Pragmatism: A Mixed Methods Paradigm

Research has been described as a systematic enquiry, whereby data are collected, analysed and interpreted so to understand, describe or predict a phenomenon (Mackenzie & Knipe, 2006). Whilst the primary aim of any research process is to increase knowledge, the type of knowledge claim arising from the study depends upon the theoretical framework employed and the philosophical stance – research paradigm – that the research methodology is founded upon. Research paradigms are distinguished by "how researchers make claims about what knowledge is (ontology), how researchers obtain knowledge (epistemology), what values go into it (axiology), how we write about it (rhetoric) and the process for studying it (methodology)" (Creswell, 2003, p. 6). Today research underpinned by different research paradigms is seen as valuable and important to knowledge generation as it forms part of a continuous evolution of research methodology used in the social sciences (Creswell, 2015). The following brief outline of the mixed methods paradigm is founded on Creswell (2003) and Teddlie and Tashakkori (2009).

In the social and behavioural sciences, research paradigms have traditionally fallen into two factions termed 'positivist' and 'constructionist' (Teddlie & Tashakkori, 2009). These opposing views lead to the divisions between quantitative and qualitative methodology, in that the positivist stance employed 'scientific methods' so to create knowledge through reducing phenomena to a measurable research problem and objectively ascertain causality, while the constructionist stance creates knowledge through humans' subjective descriptions of phenomenon (Creswell, 2003; Mackenzie & Knipe, 2006, Teddlie & Tashakkori, 2009). Considering the dominance of mono-methods, the development of the mixed methods approach, whereby researchers 'mixed' quantitative and qualitative data during the data collection phase of the study, lead to debate concerning the relationship between paradigm and methodology (Teddlie & Tashakkori, 2009). During this debate, labelled the 'paradigm wars', theorists ranged from those who saw the differences between the two paradigms as incompatible, and therefore the use of mixed methods approaches as invalid, and those that saw the differences between the two paradigms and the exclusivity of their methods as being overstressed (Cherryholmes, 1992). The mixed methods debate lead to the emergence of a third worldview referred to as the pragmatic paradigm (Creswell, 2009).

Derived from the Greek 'pragma' meaning action, pragmatism is a philosophical movement first derived from the work of Charles Saunders Peirce (Sheilds, 1998). William James, John Dewey and George Mead have since expanded on this initial work (Cherryholmes, 1992). These academics reject traditional assumptions regarding the nature of truth, the nature of knowledge and inquiry, instead focusing "on 'what works' as the truth regarding the research questions under investigation" (Tashakkori & Teddlie, 2003, p. 713). Primarily, pragmatists believe that the real world could not be accessed through one singular method (Gale, 2005). They suggest pragmatism as a means of closing the gap between the empirical scientific approach to conducting research and the newer approach of qualitative research (Tashakkori & Teddlie, 2003). As such, pragmatism can be central to the conduct of mixed methods research as it places focus on the logical link between the two paradigms of quantitative and qualitative inquiry (West, 2012).

Fundamentally, researchers holding a pragmatic worldview form this logical link by emphasising the research problem over the methods used, which enables them to utilise all available methodologies to collect data to inform the problem at hand (Creswell & Plano Clark, 2007; Creswell, 2009). Therefore, this shift in emphasis from the traditional paradigms affects our understanding of how research should be conducted and the role of the researcher in this process (Creswell, 2009). In terms of ontology, the nature of reality constructed can be

singular or multiple because the researcher is able to combine both deductive and inductive thinking to present multiple worldviews or perspectives of reality (Creswell & Plano Clark, 2007). Epistemologically, pragmatism equates to practicality. Data is collected by 'what works' when addressing the research problem, unlike positivism whereby impartiality enables the researcher to objectively collect data (Creswell, 2009). Axiology focuses upon the role of values in research. The multi-stance approach adopted within pragmatism allows the researcher to include both biased and unbiased perspectives and acknowledges that subjective and objective knowledge add value to research (Creswell & Plano Clark, 2007). In terms of methodology, both qualitative and quantitative data are collected and mixed (Creswell, 2007), a process which is thought to both enrich and complete pragmatism. As such, this combination of formal and informal rhetoric by the researcher enables the scientific and literacy 'story' of a phenomenon to be explained to produce a more complete and holistic understanding of an issue (Tashakkori & Teddlie, 2003).

Important for this research, pragmatism is a stance often adopted by education researchers utilising a mixed method research design (Creswell, 2009). Specifically, John Dewey (e.g. 1933/1998) dedicated much of his thought to the use of pragmatism in the education discipline. The work of Dewey, and others since, suggests that the mixed method epistemology allows for the emerging view of a social-constructionist approach of meaning making in education to be used alongside a post-positivist approach of reductionist measurement to obtain complementary, deeper and more meaningful knowledge than with one method alone (Dewey, 1933/1998; Vanderstaeten, 2002; Teddlie & Tashakkori, 2009). Here the quantitative method is deemed the best way to answer questions concerning 'what is there', either by providing descriptive measures or assessing relationships between dependent or independent variables in real life settings for a larger sample of people or objective texts (Creswell, 2009). While qualitative methods would contribute to answering the 'why' and 'how' these results occurred, revealing deeper perceptions around motivations and contextual factors influencing these responses (Creswell, 2009).

Pragmatism has been applied previously by researchers investigating audio feedback in higher education (e.g. Ice, Curtis, Phillips, & Wells, 2007), who have adopted mixed method designs to address their research questions. These researchers adopt pragmatism as it "opens the door to multiple methods, different worldviews, and different theoretical assumptions, as well as different forms of data collection and analysis" (Creswell, 2009, p.11) to most practically address the research problem using 'what works'. Similarly, this research also adopts pragmatism due to the methodological and theoretical practicality it affords. To

achieve the aims of this project, pragmatism offers the opportunity to use a mixed method design to better understand the experiences of students receiving feedback via this technological medium. Specifically, quantitative methods will be used to answer questions concerning the '*what*' of audio feedback, descriptively or inferentially measuring the relationship between variables in the content of tutor feedback and the opinions of students who received this feedback. While qualitative methods will contribute to answering the '*why*' and '*how*' students feel these results occurred, revealing perceptions around motivations and contextual factors influencing these responses. It is believed that such a pragmatic combination of quantitative and qualitative approaches will provide a more holistic and rigorous understanding of the problem than either approach could achieve singularly (Creswell & Plano Clark, 2007). At a theoretical level, pragmatism also offers the ability to utilise the most appropriate theoretical lens in order to interpret the data, being that of Yang and Carless' (2013) framework, as it "opens the door…to different worldviews" (Creswell, 2009, p.11), while still taking into account the practical application of providing feedback to students when using a new technology.

3.3 Theoretical Lens: Yang and Carless' Dialogic Feedback Framework

The type of knowledge claim arising from a study depends on both the philosophical stance employed and the theoretical framework that the research methodology is founded upon. As outlined in Chapter Two, in order to identify the benefits or potential impact of providing audio feedback, it is important that the theoretical standpoint of the researcher is identified. Throughout this study and thesis preparation, the dialogic feedback framework of Yang & Carless (2013) has been used as a lens though which the construction of the research questions and the analysis of data were viewed. In consideration of the framework, this research is interested in the potential impact of providing feedback to students using audio technology (structural dimension) on the subsequent encouragement or discouragement of elements concerning both the content and processing of feedback (cognitive dimension) and the interpersonal negotiation of feedback (social-affective dimension) between students and tutors (see Figure 3.1). A full research question breakdown is provided in Appendix A, which relates methods of inquiry to the dimension of dialogic feedback it aimed to address.

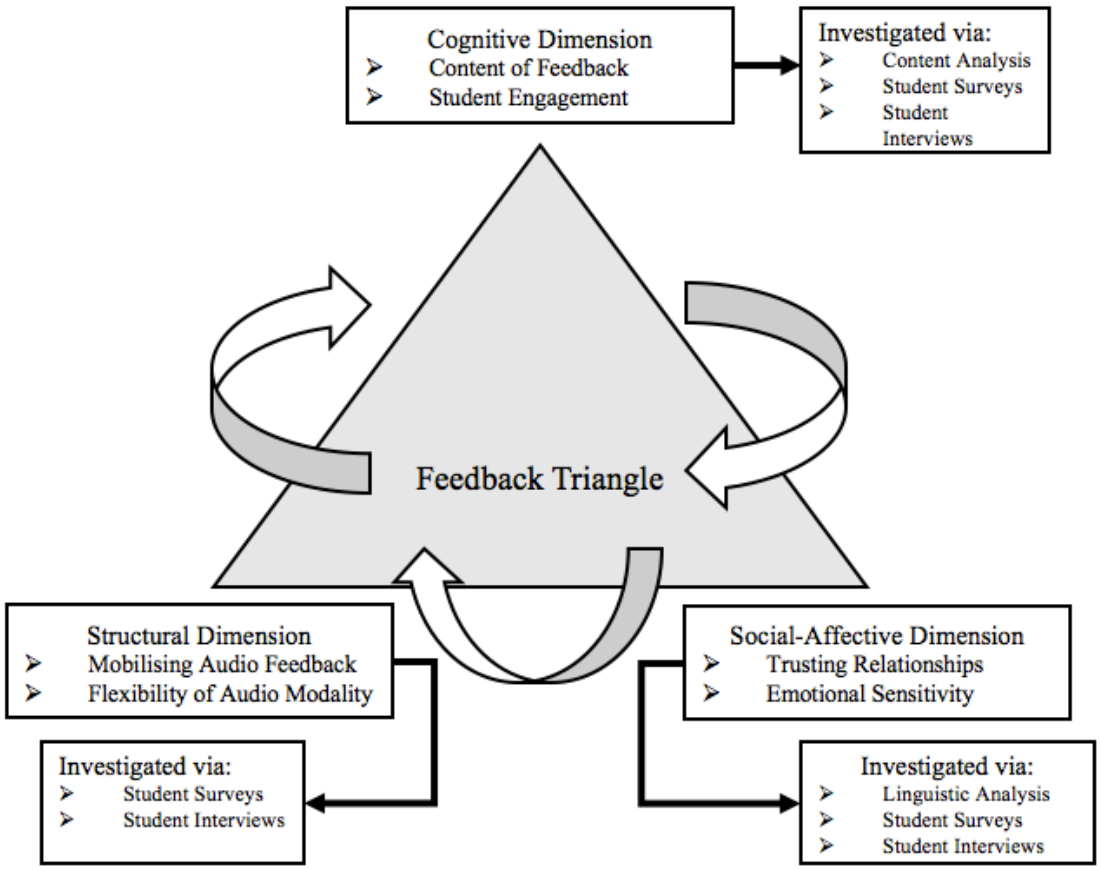

Figure 3.1 Yang & Carless' (2013) Framework for Dialogic Feedback applied to the data types collected in this study

As previously outlined, few studies addressing the use of audio feedback in higher education include an application of theory, which the researcher feels leaves little scope to fully acknowledge the potential benefits of providing audio, as opposed to written, feedback to students. Considering this, the framework for dialogic feedback was chosen for two primary reasons. Firstly, the framework holds a strong foundation in dialogic pedagogy (see Wells, 1999), which places importance on the interactional features believed to better construct meaning for students when using spoken communication, and the researcher felt this was congruent with the use of spoken comments provided to students using audio recording technology. Secondly, Yang and Carless' (2013) views concerning the interrelation between cognitive, social-affective and structural elements of receiving feedback seemed to resonate with previous conclusions drawn in literature discussing audio feedback (e.g. see Ice, Curtis, Phillips, & Wells, 2007 for discussion of the social effects of audio feedback). Thus, the researcher feels embedding a mixed method study within the framework for dialogic feedback will enable conclusions to be made as to why such findings have arose within the previous literature discussing the use of audio feedback in higher education.

3.4 Research Design: A Mixed Method Explanatory Sequential Design

Due to the theoretical framework encompassing a multitude of factors, much emphasis was given to understanding the development and application of mixed methods as a separate research design in its' own right (Tashakkori & Teddlie, 2003). Morse (1991) aimed to encourage the facilitation of mixed methods designs by introducing a notation system, which now appears extensively in mixed method literature (Creswell & Plano Clark, 2007; Creswell, 2009). He introduced notations such as pluses (+) to indicate methods which occurred at the same time and arrows (→) to signify methods occurring in sequence (Creswell & Plano Clarke, 2007, p. 41). Other writers, such as Plano Clark (Plano Clark & Creswell, 2007), have added to the notation system so to better explain the complexities of mixed method designs in diagrammatical formats. The primary method of enquiry is denoted by uppercase lettering and the secondary method in lowercase (Morse, 2003). Shapes such as boxes and ovals illustrate the steps in the research design process and the use of parenthesis indicates methods that are embedded within other methods (Creswell & Plano Clarke, 2007; Steckler, Mcleroy, Goodman, Bird, & McCormick, 1992). Creswell (2015) has since suggested the integration of basic procedures and products to be written under or alongside these geometrical shapes, so to further illustrate the methodology to the reader. This visual representation of the research design is seen as an integral phase in a mixed method study (Creswell, 2009), as it is important in guiding the researcher in the methodological decisions they make and presents the logic by which they will make their interpretations (Creswell & Plano Clarke, 2007).

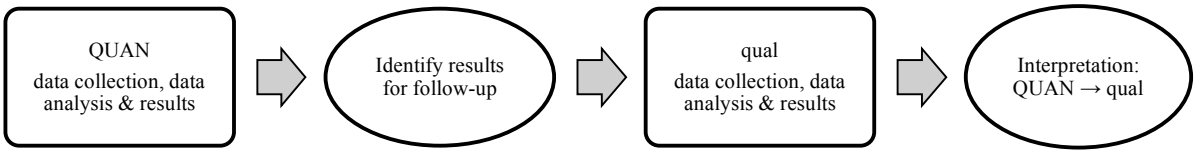

Figure 3.2 Mixed Method Explanatory Sequential Design (Creswell, 2015, p. 56)

Diagrammatic representation of Creswell's (2015) Mixed Method Explanatory Sequential Design is illustrated in Figure 3.2. The explanatory design is a two-phase design whereby the qualitative data helps to explain or build on the initial quantitative results (Creswell, 2015). According to Tashakkori and Teddlie (1998) and Creswell (2015), this design is best suited to researchers who want qualitative results to expand upon or explain significant or non-significant quantitative results. Often researchers use the qualitative phase

to understand questions concerning 'why' something occurred, so to add context or a holistic understanding when interpreting quantitative results (Creswell & Plano Clarke, 2007). It is also a useful design if the researcher aims to form participant groups based on quantitative results and follow up those groups with the qualitative phase of the research (Creswell, 2015). This design starts with the collection and analysis of quantitative data and follows with a qualitative phase that develops from and connects to some of the results of the quantitative phase (Creswell & Plano Clarke, 2007). The weighting in this design is usually on the quantitative data, outlined by Morse and Niehaus (2009) as the main drive for the study. Advantages of the explanatory sequential design include its strong two phase structure and the link to emergent approaches, whereby the second qualitative phase can be designed dependent upon the outcome of the first quantitative phase (Creswell, Klassen, Plano Clark, & Smith, 2011).

3.4.1 The Application of a Mixed Method Design

This study aimed to explore the dialogic potential of providing audio as opposed to written feedback on students' summative assignments in higher education using an Explanatory Sequential Design (ESD). Specifically, the follow-up explanation model was utilised, whereby the qualitative phase expanded on the quantitative results to provide a more *complete* and *holistic* understanding of the outcome (Ivankova, Creswell, & Stick, 2006). A basic explanatory sequential design collects and analyses one source of quantitative data and one source of qualitative data to obtain explanations of the quantitative results (Creswell & Plano Clark, 2007). However, advanced explanatory sequential design may collect multiple sources of each data type (Creswell, 2015). This study utilises an advanced design as it collects three sources of quantitative data, compared to one source of qualitative data, so to fulfil the specific requirements of the research questions (see Tsushima, 2015 for a similar analytic move). A breakdown of each data type is presented visually in Table 3.1.

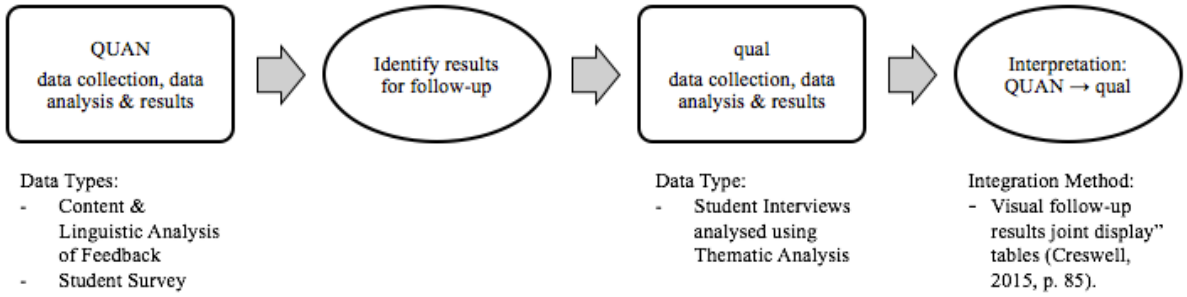

Figure 3.3 Procedure diagram for advanced explanatory sequential mixed methods design employing a follow-up explanation model for a study on the dialogic potential of audio feedback

As visually presented in Figure 3.3, the initial quantitative phase simultaneously worked with different types of data to achieve a more comprehensive understanding of the experiences of students receiving audio feedback when assessed in relation to elements of the framework for dialogic feedback (Yang & Carless, 2013). To elaborate further, Figure 3.1 (see Section 3.3 of this chapter) provides a mapping of each data type to the dimension of dialogic feedback it aims to address. In order to fully address each dimension of the framework, the researcher felt it was necessary to collect comparative information on *what* feedback tutors provide to students on their assignment, alongside an analysis of how students *themselves* feel they receive and interact with such comments. This quantitative data was the grounding for this study as it provided opportunity for precision when assessing the potential differences arising between audio and written feedback modalities.

Data Type	Sample	Procedure	Product
Feedback Scripts	• 14 written feedback and 14 audio feedback scripts (transcribed)	• Content analysis	• Excel data base with coded feedback from both samples • Descriptive statistics
Feedback Scripts	• 14 written feedback and 14 audio feedback scripts (transcribed)	• Linguistic analysis	• Excel data base with coded feedback from both samples • Inferential and descriptive statistics
Student Survey	• 24 students who responded to survey from two psychology modules	• Statistical analysis of survey responses	• SPSS database with variables/scales • Descriptive statistics
Semi-Structured Student Interviews	• 8 students who participated in the survey	• Thematic analysis	• Text database transcribed for easy coding • Development of themes based on student perceptions

Table 3.1 Table presenting a breakdown of each data type utilised in the quantitative and qualitative phases of the study

Data analysis of the quantitative phase identified differences arising between the two feedback modalities both in content and in student opinions (see Table 3.1). Considering this, the first phase was central to the development of the second phase of the study for several reasons. First, it aided the researcher to identify the types of questions to ask students when interviewed, which ensured rich data were gathered that outlined the main issues of relevance for the study. Secondly, it enabled the researcher to sample directly from students who partook in the quantitative phase of the research and follow-up their responses in the qualitative phase (see Table 3.1). Using the data obtained in this quantitative phase, in-depth semi-structured interviews were employed to explore areas identified in the quantitative findings and provide a more complete and holistic understanding of the outcome. As the literature shows, the phenomena of this research (e.g. student perceptions of interpersonal relationships) are subjective by nature. A purely quantitative approach would not have adequately provided an understanding of the holistic experience of students who received audio feedback. Therefore, quantitative measurements were important to descriptively identify significant differences between audio and written modalities, and were also used to steer the in-depth qualitative study to explore why those results occurred (Creswell & Plano Clarke, 2007).

3.4.2 Data Analysis and Integration Using an Explanatory Sequential Design

The analysis of data in mixed method research involves the analysis of both quantitative and qualitative data (Creswell, 2015). Each data type is analysed using a suitable method of analysis; quantitative data is analysed quantitatively and qualitative data is analysed qualitatively (Creswell, 2015). Although the process may hold many similarities, i.e. preparation, data collection, data analysis, and data representation (Creswell & Plano Clark, 2007), in mixed method research the analysis is contingent upon the design of the study. As this study employed an explanatory sequential design, sequential data analysis has been employed (see Figure 3.4), which was then followed by the data integration phase.

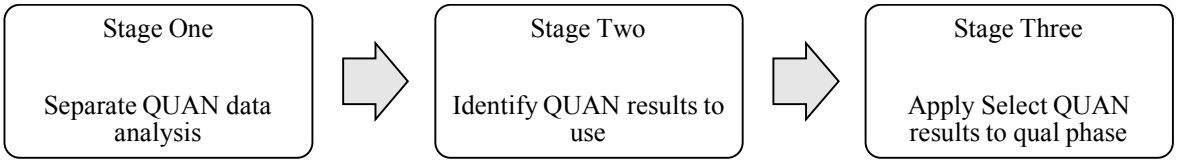

Figure 3.4 Sequential Explanatory Data Analysis

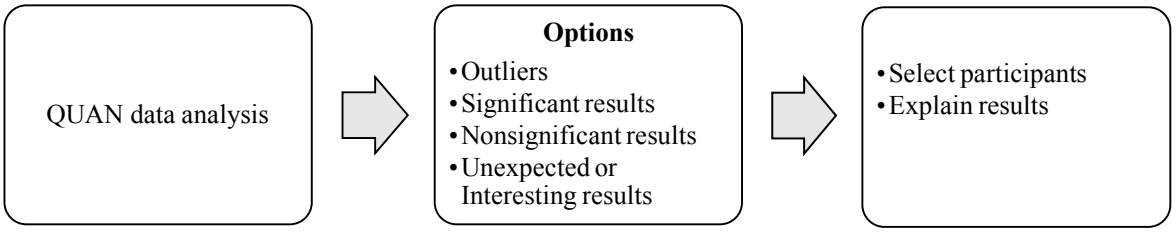

Figure 3.5 Sequential Explanatory Data Analysis Procedures (Creswell & Plano Clark, 2007, p.147)

As sequential designs involve two overarching phases of data collection. The purpose of analysing the data sequentially is so that the first major quantitative data base informs the second smaller qualitative data base (Creswell & Plano Clark, 2007). Within explanatory sequential designs, the aim is to answer the mixed method question: In what way does the qualitative data help to explain the quantitative results? More specifically for this study: In what way does the semi-structured interview help explain the experiences of students receiving audio feedback reported within the quantitative results? Hence, as presented in Figure 3.5, significant or interesting quantitative data was selected to help guide and formulate questions to ask students in the qualitative phase of the study. For example, quantitative data identified that the majority of students' felt receiving audio feedback promoted the approachability of their tutor. This result generated the need to ask questions, such as "Why do you feel that audio or written feedback better promotes the approachability of your tutor?" with emphasis later emplaced on "*Why* do you think this?" as a way to explore why these results occurred and acquire a more holistic understanding of the issue. In addition, the researcher compared the findings from the interviews to earlier quantitative data by using a visual "follow-up results joint display" table (Creswell, 2015, p. 85). This table "presents the quantitative results in one column, the qualitative follow up results in a second column and information about how the qualitative results help explain the quantitative results in a final column" (Creswell, 2015. p. 85). By doing this, the researcher could compare the qualities of dialogic feedback attributed to the audio modality from both phases of the study, within the framework proposed by Yang and Carless (2013). Analysing the data in this way highlights the importance of both study phases. The qualitative and quantitative phases are supportive of each other and intrinsically linked to the ability of the study to build a holistic and comprehensive understanding of the dialogic potential of providing audio feedback to students in higher education.

3.4.3 Reporting Mixed Methods Research

As there are quite strict codes of reporting linked with both the quantitative and qualitative strands of inquiry, an important consideration when writing up mixed methods research is choosing the most appropriate representation of the analysis and results (Creswell, 2015). Quantitative analysis and results are written using neutral and objective language, while qualitative research often encompasses the researchers own voice more audibly in the report (Creswell & Plano Clark, 2007; Creswell, 2015).

It has been stated that mixed method research must communicate in such a way as to attract both qualitative and quantitative readers (Greene, 2012). Sandelowski (2003) argues that a mixed method report must be written to appeal and persuade readers from diverse academic backgrounds and outlines this as a "crisis of representation" as the researcher must establish what presentation style would lead to the most convincing publication (p.322).

To arrive at the most appropriate way to present the quantitative and qualitative methods of analysis and findings, the researcher felt that the logical structure of reporting would follow the different sources of data used in the mixed method design. To explain, this structure would be used to formulate four chapters on the methods of analysis and findings (Chapters 4, 5, 6 and 7), whereby Chapters Four and Five are formulated of quantitative data collected from written and audio feedback scripts, Chapter Six is formed of quantitative data collected from students using questionnaire surveys and Chapter Seven discusses the qualitative interviews with students. As well as reporting the results, these chapters will also outline the specific methodological issues (e.g. sampling) relevant to each of the study phases. Integration and discussion of the findings occurs in Chapter Eight, which holds a side-by-side comparative emphasis, so to build an account of how the quantitative findings may be better explained and understood by the inclusion of the qualitative data.

3.5 Ethical Considerations

Permission to conduct the study was approved by the ethics committee within the Department of Psychology at Aberystwyth University (see Appendix B, C and D). The Departmental Ethics Committee protects the rights of participants involved in any research in accordance with the British Psychological Society (BPS) set ethics and standards. The four ethical principles outlined by the BPS for the conduct of research such as respect, competence, responsibility and integrity were followed throughout the study (BPS, 2009).

Informed consent was gained from all participants involved in the study and adherence to the BPS guidelines for consent of human participants in research was abided by. Section 1.3 of the BPS code of ethics was followed, which requires that informed consent involves giving scope to individuals' capacity to make their own decisions concerning participation and that participation is the result of a choice made by the participants (BPS, 2009, p. 12). The conditions of consent included consent as a voluntary choice, based on sufficient information and an adequate understanding of the proposed research and the potential implications of participation (BPS, 2009, p. 12). Following the BPS code of ethics, participants were also informed of their right to withdraw themselves or their data from research participation (BPS, 2009, p. 14).

Throughout the study the standards of confidentiality as stipulated by the BPS were followed. This included complying to section 1.2 of the BPS code of ethics by recoding, processing and storing confidential information in such a way as to avoid disclosure (BSP, 2009, p.10). Data storage followed the principles set out by Aberystwyth University Ethics requirements and the Aberystwyth University Data Management Policy. During the study, all data were stored securely on the university server and password protected. Once the study is closed, all data will be collated and deposited in an appropriate subject-specific repository. The institutional requirements of Aberystwyth University Research Ethics Committee on ethical conduct in human research were maintained throughout this study and most importantly, the decisions of the participants were considered at all times. The specific ethical considerations relating to each of the study phases will be discussed within the four chapters on the methods of analysis and findings (Chapters 4, 5, 6 and 7). It is believed this structure will enable the contextualisation of the ethical issues considered within each phase of the study.

3.6 Conclusion

This chapter locates the study within the pragmatic mixed methods paradigm (Teddlie & Tashakkori, 2009). Employing this paradigm enables the researcher to use multiple methods, different worldviews and theoretical assumptions to obtain a comprehensive understanding of the issue (Creswell, 2009). As this paradigm allows for the pragmatic adoption of different theoretical assumptions, Yang and Carless' (2013) Framework for Dialogic Feedback is implemented as the theoretical lens for the study. The nature of the research questions generated through this theoretical lens justified an explanatory sequential mixed methods

design (Creswell & Plano Clark, 2007). This methodological design will enable data gathered using student surveys and textual analysis to be followed up with in-depth qualitative interviews, so to provide a more complete and holistic understanding of the dialogic potential of audio feedback given to students in higher education. The following chapters will present the individual methods of data collection, means of analysis and findings for each data set included within the study. Finally, a comparative chapter is provided that includes a side-by-side review of the study findings. The aim of this final chapter is to build an account of how the quantitative findings may be better explained by the inclusion of the qualitative data.

4 ANALYSIS OF FEEDBACK SCRIPTS: '*WHAT'* ISSUES TUTORS EXPRESS IN AUDIO FEEDBACK

4.1 Introduction

This chapter provides a comprehensive outline of the methodology and quantitative findings for the first type of quantitative data assessed in this study. The data presented in this chapter primarily aims to go some way to answer the research question *"How far might the provision of assessment feedback to students using audio recording technology encourage the cognitive features of dialogic feedback, when compared to written feedback?"* by conducting content based analysis of 'what' types of issues tutors discuss in their assignment feedback to students. During the process of this stage of the study, the classification system used to assess the data were that devised by Brown and Glover (2004), which engages with dialogic literature to evaluate the quality of feedback provided to students in higher education. This chapter outlines the specific methods of data collection and discusses the analytic framework for this phase of the study, with annotated examples taken from the body of teacher feedback data collected. The chapter then proceeds to outline the quantitative results acquired from this stage of analysis and provides a short discussion concerning their application and relevance to help explore the dialogic potential of providing audio, as opposed to written feedback, on students' assignments in higher education.

4.2 Rationale and Quantitative Research Questions

The content of assignment feedback, such as a tutor's discussion of concepts and skills exhibited within the student's work, is thought to be a core element in facilitating effective disciplinary learning in higher education and may be discussed within the cognitive dimension of Yang and Carless' (2013) Three-Factor Framework. This is as learning requires engagement with issues embedded in tutor feedback, which are central in communicating disciplinary specific components (e.g. knowledge, beliefs, principles as well as skills and methodologies), so that students may become confident in contributing in disciplinary practice (Yang & Carless, 2013). Considering the importance of the content of tutor feedback, there has been many studies (e.g. Glover, 2004) and theoretical papers (e.g. Nicol & MacFarlane-Dick, 2006) over the past two decades aiming to identify what constitutes quality feedback for students that can best encourage their self-regulation and continual development.

Research conducted in this area is primarily student centred, whereby surveys and/or interviews are carried out to build an understanding of what students most value in their feedback (e.g. Brown, Glover, Freake & Stevens, 2005; Glover, 2004; Roberts, 1996). Roberts (1996) conducted survey research on twenty-two open university glaciology students. Findings from this study reported that students viewed 'good' feedback as that which was encouraging and positive, yet still outlined clearly where they could improve. They also highly valued the detail that tutors would give when providing a correction of an issue, often by the tutor outlining 'why' or 'how' these corrections were the desired answers. The findings of this study have been confirmed by Brown et al, (2004), which also found students valued feedback on the content of their assignment more so than skills based feedback. However, more recent literature recognises that while the student may appear to be in the best position to judge the value of feedback, they may not always recognise the benefits it provides them (Price, Handley, Millar & O'Donovan, 2010). In a theoretical paper founded upon an extensive literature search, Nicol and MacFarlane-Dick (2006) identified seven broad principles of good feedback practice, with the aim to encourage the dialogic values of active student participation and self-regulation in learning (see Table. 4.1). Important outcomes of 'good' feedback identified in this paper, are that tutors should provide feedback to students that will enable them to close the gap between current and desired performance to improve their future work (Nicol & MacFarlane-Dick, 2006).

Principles of 'Good' Feedback Practice
• Helps clarify what good performance is (goals, criteria, expected standards)
• Facilitates the development of self-assessment (reflection) in learning
• Delivers high-quality information to students about their learning
• Encourages positive motivational beliefs and self-esteem
• Provides opportunities to close the gap between current and desired performance
• Provides information to teachers that can be used to help shape teaching
• Encourages peer and tutor dialogue around learning

Table 4.1 Nicol & MacFarlane-Dick's (2006) Seven Principles of 'Good' Feedback Practice (Source: modified from Brown & Glover, 2006, p.82)

Considering the value that good-quality feedback can play on enhancing students learning (Race, 2005), it is surprising that limited literature attempts to systematically classify the different types of comments that tutors provide so that the quality of feedback can be evaluated. Categories of feedback content have been devised to analyse small face-to-face interactions (Bales, 1950), written feedback provided to language distance learners (Hyland, 2001), and written feedback provided to Masters of Education students (Hyatt, 2005). These

three general categorisation systems focus on the work of the student (e.g. content, accuracy, organisation and presentation) and the learning process (i.e. praise and encouragement concerning ways of improving work for the future) examined in tutor feedback. However, as noted by Brown and Glover (2006) issues arise with the above classification systems. The main issue highlighted by these authors was that the different features of content and skills based feedback that guide students' learning were not fully explicated though the use of a theoretical frame and thus, they do not fully aid in understanding the extent to which closure of the "performance-feedback-reflection-performance" feedback loop is facilitated (Brown & Glover, 2006, p. 83). Subsequently, Brown and Glover (2006) investigated the quality of written feedback tutors provided to science students at the Open University. In this study, they developed a classification system which enabled the strengths and weaknesses of tutor feedback to be empirically evaluated within the conceptual framework outlined by Nicol and MacFarlane-Dick (2006). Through the analysis of tutor feedback provided on 112 student assignments, Brown and Glover (2006) were able to identify weaknesses in the 'type' and 'depth' of feedback comments, which they suggested prevented students from productively engaging with their feedback and using it to improve their future work.

In response to the research discussed above, it is suggested that the contribution of providing feedback using different modalities may be a new avenue of research to be investigated using content based interpretations (e.g. Brown & Glover, 2006). An analysis using Brown and Glover's (2006) classification system would allow an investigative focus on *what* tutors say in their feedback to students. Specifically, this refers to whether providing feedback to students using the audio, as opposed to written, modality impacts upon the types of issues tutors comment upon and the depth of such comments provided by tutors. Once the content of each feedback modality has been identified this would allow an evaluation of the strengths and weakness of both types of feedback in accordance to the conditions and principles for good feedback outlined by Nicol and McFarlane-Dick (2006) and the overarching Framework for Dialogic Feedback (Yang & Carless, 2013), of which the former conceptual frame resides. The content of tutor feedback merits attention because it can shape students' motivation and ability to close the gap between current and desired performance to improve their future work (Yang & Carless, 2013). Of specific interest for this study, it also bears on what Yang & Carless (2013) purposed when outlining the cognitive dimension, in that the content of dialogic "feedback needs to focus students' attention on how to tackle disciplinary problems effectively, how to increase their capacity to self-regulate and how to use feedback productively …and assist in their appraisal of the gap between current and

desired performance" (p. 289). In consideration, this study aims to investigate whether and how the modality used to provide feedback may impact the content of feedback tutors provide to students on their assignment. The following sub-research questions have been formulated to guide the study:

1. Are there similarities/differences in the types of issues commented upon by tutors providing feedback using audio and written modalities?

2. Are there similarities/differences in the depth of issues commented upon by tutors providing feedback using audio and written modalities?

4.3 Methodology

4.3.1 Ethical Considerations

Ethical approval for this phase of the study was provided by the Ethics Committee in the Department of Psychology at Aberystwyth University (see Appendix D). To elaborate upon the key issues within the report, it was decided by the Departmental Ethics Committee that as only the tutors' feedback, rather than the students' assignment, would be of focus for the analysis, informed consent would only be required from the tutors to use their data within the research. As such, the potential participants were provided with the relevant information regarding the study and were contacted for their informed consent if they wished to allow their data to be used for anonymous analysis (see Appendix F). Confidentiality was assured by anonymising the participants' names within the research report and analysis. Hence, all data would be addressed dependent upon the mode of feedback provided.

4.3.2 Participants

In this phase of the study, tutors were recruited via an initial audio feedback survey (Appendix E) in the 2017-18 academic year. An email was sent to all staff members across Aberystwyth University asking those tutors who provide audio feedback to volunteer to participate in a short online survey, which was administered via Jisc Online Surveys©. The survey was used as a means of assessing the number of staff members who had ever provided audio feedback across the university. Of the two tutors who completed the survey only one stated that they would be interested in participating further. When contacted this tutor explained the instructional setting in which they provided audio feedback to their students.

Importantly, they had provided audio feedback on a Criminology module in the previous academic year (2016-2017), whereby the marking allocation was divided between two tutors. Interestingly, this resulted in one tutor who had chosen to provide students with audio feedback and the other who had chosen to provide students with written feedback using Turnitin Grademark©. Following this information, if potential participants wished to proceed, informed consent was gained and arrangements to acquire their feedback were made. The resulting participants were both female and had been teaching for a similar amount of time at the university.

4.3.3 Data

The data for this study consisted of feedback reports on students' summative assignments submitted for a Criminology module at Aberystwyth University, whereby one tutor chose to provide students audio feedback and the other chose to provide students with written feedback using Turnitin Grademark©. Feedback reports from both tutors were matched on the assignment type completed and the grade boundary awarded, so to standardise the data for analysis. This resulted in 28 feedback reports being used within the analysis, 14 of those provided using the audio modality and 14 provided using the written modality. The mean grade awarded was 60 for summative assignments assessed using audio feedback and 61 for those receiving written feedback. All feedback reports were imported from Turnitin Grademark© onto Microsoft Word (version 15.33). Considering the spoken nature of audio feedback, the audio files were first transcribed orthographically to produce a verbatim record of what was spoken by the tutor. In the transcriptions, repetitions and false starts were transcribed. The transcripts have been checked manually for accuracy. In total, 4049 words of audio feedback and 2846 words of written audio feedback were available for analysis. The average length of each piece of assignment feedback analysed was 289 words for that provided using the audio modality and 205 for the written modality.

4.3.4 Analytic Framework

To address the research questions, this study utilises the classification system developed by Brown and Glover (2006). This classification system allows tutor feedback to be analysed within the conceptual framework adopted for this project. Specifically, Brown and Glover (2006) draw upon the work of Nicol and Macfarlane-Dick (2006) who outline principles of good feedback based on dialogic pedagogy. The principles outlined by Nicol and Macfarlane-

Dick (2006) have since been integrated into the Framework for Dialogic Feedback by Yang and Carless (2013), which forms the theoretical frame for this mixed methods study. As such, the researcher argues that the classification system devised by Brown and Glover (2006) theoretically resonates with the framework of analysis adopted in this research and may be used to evaluate the dialogic potential of tutor feedback in accordance to this frame. See Table 4.2 for the researchers positioning of the good principles for feedback practice within the framework for dialogic feedback.

Five overarching categories of feedback comments were outlined by Brown and Glover (2006) based on feedback practice:

> - Comments about the *content* of a student's response: i.e., the student's knowledge and understanding of topics being assessed (coded 'C')
> - Comments that help a student to develop appropriate *skills* (coded 'S')
> - Comments that actively encourage *further learning* (coded 'F')
> - Comments providing a qualitative assessment of a student's performance that are *motivational* (coded 'M')
> - Comments providing a qualitative assessment of a student's performance that may *de-motivate* (coded 'DM')
>
> (Brown & Glover, 2006, p. 83)

The first four of these overarching categories help students to improve their work and motivation (Brown and Glover, 2006). The final category includes 'final vocabulary' (Rorty, 1989), which includes "value laden, judgmental words that may inhibit further learning by damaging students' self-esteem" (Brown and Glover, 2006, p. 83). Each category is then subdivided to enable further analysis of the types of feedback within each category (Brown and Glover, 2006). The lower-case codes ascribed to each have been chosen to reflect directly the type of feedback comment that has been made by adopting the same first letter (see Table 4.2).

Importantly, as suggested by Brown and Glover (2006), this categorisation system has been adapted to suit a social-science rather than a science discipline of focus in their study. As such, predominantly sub-codes residing in the 'skills' category were modified to include important skills for students to develop in their work in the social sciences i.e. the ability to

critically assess literature when producing an essay. See Table 4.2 for the adapted classification system used in this study (see Appendix G for a more developed explanation of each code and sub-code).

Code	Type of Comment	Relation to Principles of Good Feedback Practice (Nicol & Macfarlane-Dick, 2006)	Positioning in Framework for Dialogic Feedback (Yang & Carless, 2013)
Comments on the Content of Students' Assignments (coded 'C')			
Ce	Error/ misconception	Helps clarify what good performance is (expected standards), provides opportunities to close the gap between current and desired performance, delivers high quality information to students about their learning.	Cognitive Dimension
Co	Omission of relevant material		
Ci	Irrelevant material included		
Comments Designed to Develop Students' Skills (coded 'S')			
Se	English usage	Helps clarify what good performance (expected standards), provides opportunities to close the gap between current and desired performance.	Cognitive Dimension
Sca	Critical analysis		
Sr	Referencing/ bibliography		
Sre	Research		
Sp	Presentation		
Sa	Academic register		
Sw	Writing structure		
Comments That Encourage Further Learning (coded 'F')			
Fd	Dialogue with a student encouraged	Encourages teacher dialogue around learning, facilitates development of reflection in learning.	Cognitive Dimension
Ff	Further study/assessment referred to		
Fr	Resource materials referred to		
Qualitative Assessment of Students' Performance – Motivational Comments (coded 'M')			
Mp	Praise	Encourage positive motivational beliefs and self-esteem.	Interrelation of Cognitive and Social-Affective Dimensions
Me	Encouragement		
Qualitative Assessment of Students' Performance – De-Motivational Comments (coded 'MD')			
DMn	Negative words/phrases (e.g. 'you should never') used	Discourage positive motivational beliefs and self-esteem.	Interrelation of Cognitive and Social-Affective Dimensions
DMj	Judgement of a student's performance is personal and negative (e.g. 'careless')		

Table 4.2 The modified coding system used for the analysis of audio and written feedback comments (Source: modified from Brown & Glover, 2006, p.84)

The classification system also measures the depth of comments to gain an understanding of the extent to which feedback may help students improve their learning (Brown & Glover, 2006). Different levels of feedback comments are provided number codes to reflect their depth of explanation, with the exemption of 'de-motivational feedback' (Brown & Glover, 2006). Regarding 'skills' and 'content' feedback comments a tutor can:

> - Acknowledge a weakness: i.e. acknowledge a performance gap exists (level 1).
> - Provide a correction: i.e. give the student the information needed to close the gap (level 2).
> - Explain why the student's response is inappropriate/why the correction is a preferred response (level 3). This then closes the feedback loop
>
> (Brown & Glover, 2006, p. 85)

As the comments that were coded 'motivational' were often basic i.e. 'well done' or 'good job' (Level 1), the level two or three coding was determined by the extent to which the basis for praise and encouragement was explained by the tutor. Similarly, the amount of detail determined the level of coding for 'further learning' comments. It is important to note that any singular feedback comment from a tutor can be assigned more than one code (Brown & Glover, 2006). For example, a tutor may acknowledge (Co1) and correct an omission of relevant content (Co2) by using negative words or phrases (DMn). Equally, a tutor might suggest the presence of irrelevant material (Ci1) and correct it because it is erroneous as well (Ce2). As Brown and Glover (2006) suggest there is a high subjectivity involved in assigning codes to feedback comments and so the researcher only aims to provide pointers on the comparative strengths and weaknesses of audio and written feedback content rather than an exact diagnosis.

4.4 Findings

4.4.1 Comparing the Types of Comments in Audio and Written Feedback

In Figure 4.1 the proportions of the different categories of feedback provided to students using the audio modality are compared to those provided using the written modality and a high degree of uniformity can be seen. Encouragingly, the majority of the feedback from both modalities was skills focused, designed to clarify expected disciplinary standards and enable students to feedforward their tutor's comments into future work, with 54% (*n*=122) of written comments and 55% (*n*=137) of audio comments residing within this category. Similarly, both modalities provided a lesser amount of content specific feedback, thought to lack feedforward potential and be relevant only to the topics that were assessed, representing 18% (*n*=41) of the written comments and 20% (*n*=49) of the audio comments analysed. Students also received from both modalities a reasonably large amount of motivational feedback, designed to encourage positive motivational beliefs and self-esteem, as 22% (*n*=49) of written comments and 19% (*n*=47) of the audio comments were placed within this category. Promisingly, very little of the feedback was demotivational, characterising only 1% (*n* =3) of written comments and none of audio comments analysed. However, fewer comments from both modalities were thought to encourage further learning, representing only 5% (*n*=11) of students' written feedback and 6% (*n*=14) of students' audio feedback.

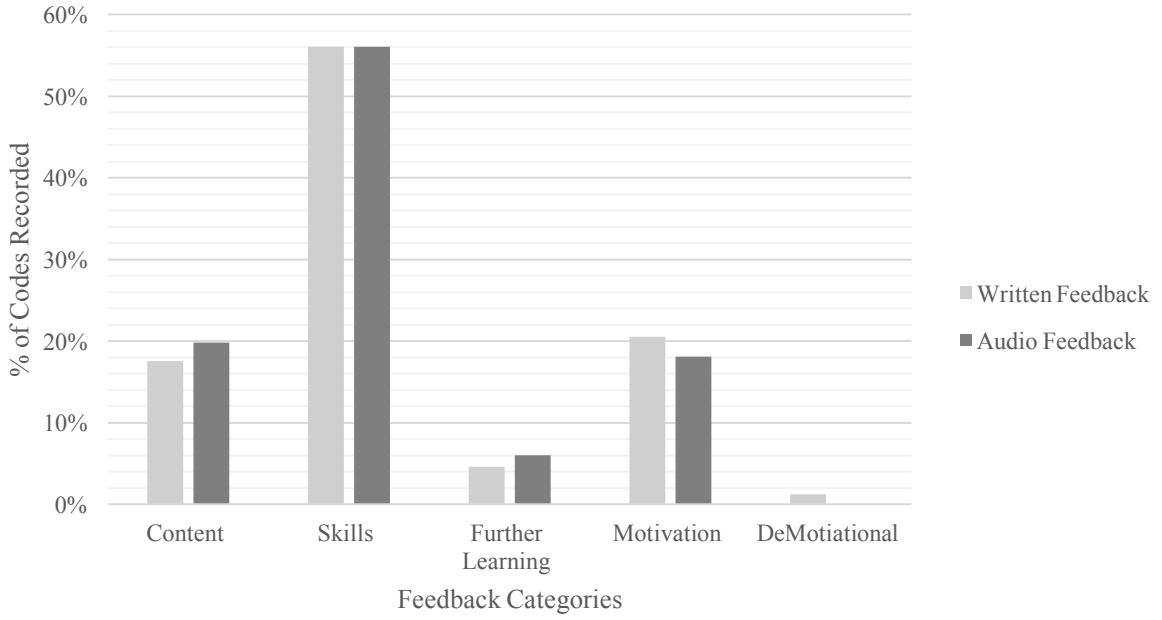

Figure 4.1 Analysis of the different categories of feedback provided using the audio compared to the written feedback modality

4.4.2 Comparing the Sub-Types of Comments in Audio and Written Feedback

A more detailed analysis of the sub-themes of content feedback (see Figure 4.2) showed that audio feedback provided more discussion on issues concerning irrelevant content in students' assignments (*n*=24, 49%), than did written feedback (*n*=3, 7%). Whereas, written feedback provided more discussion on areas concerning the omission of relevant content (*n*=30, 73%) than did audio feedback (*n* =20, 41%), and highlighted slightly more errors or misconceptions (*n*=8, 20%) made by students in their assignments, compared to those noted in audio feedback (*n*=5, 10%). Notably, as the assignment was an end of module assessment, much of this type of feedback was topic specific, justifying to the students 'what counted' (Boud, 2000). As explained by Brown and Glover (2006), this type of feedback feeds *back* more than it feeds *forward,* so it does not serve the formative purpose of helping students to improve their future work.

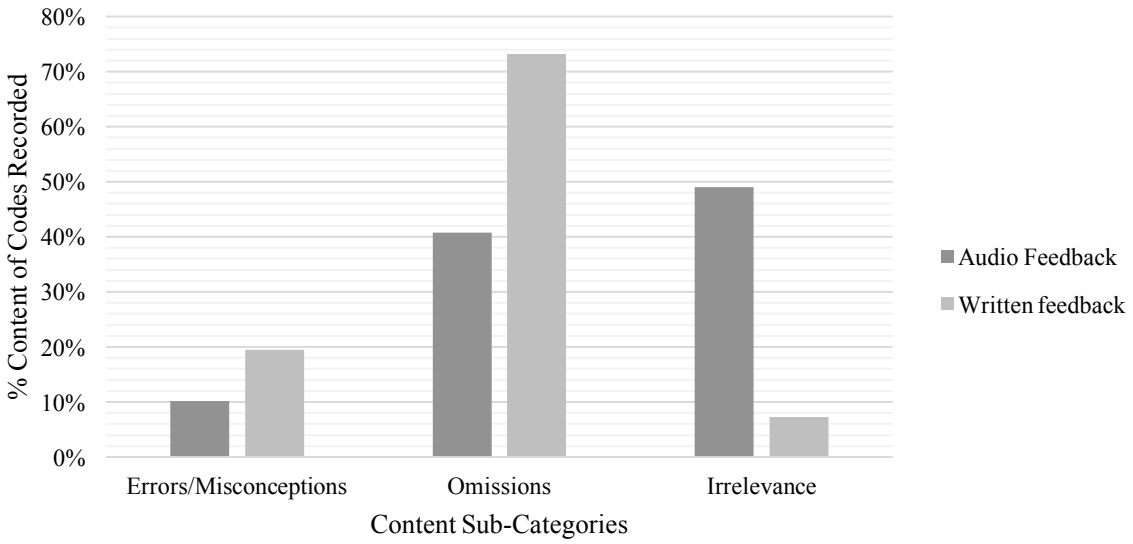

Figure 4.2 Analysis of the sub-categories of content feedback provided using the audio compared to the written feedback modality

A comprehensive analysis of the subtypes of skills feedback (Figure 4.3) showed that written feedback provided greater consideration to students' grammar and spelling (*n*=13, 11%), than did audio feedback (*n*=1, 1%). Similarly, slightly more attention was attributed to errors in referencing in written feedback (*n*= 35, 29%), as opposed to audio feedback (*n*=31, 23%). Interestingly, comments concerning grammar, punctuation and referencing are quite

specific issues and may be more difficult to pinpoint using audio feedback. However, audio feedback attributed a greater discussion to developing critical analysis (*n*=46, 34%), than did written feedback (*n*=27, 22%). This type of comment develops more so what Yang and Carless (2013) outlined as disciplinary specific skills, central component of dialogic feedback. Audio based feedback also outlined slightly more issues with writing structure (*n*=40, 29%) when compared to written feedback (*n*=28, 23%). Skills comments concerning academic register and issues of presentation were poorly represented by both feedback modalities (see Figure 4.3).

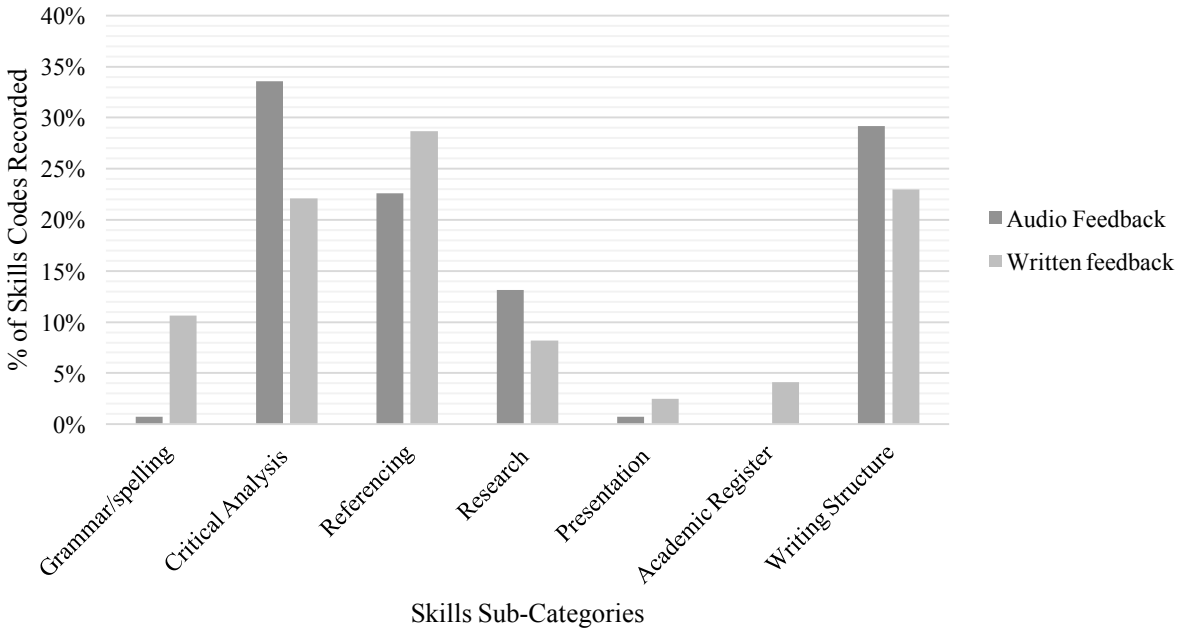

Figure 4.3 Analysis of the sub-categories of skills feedback provided using the audio compared to the written feedback modality

An analysis of the sub-types of further learning feedback (see Figure 4.4) revealed that more comments made using the written modality aimed to encourage further dialogue with a tutor (*n*=5, 42%) than those provided in audio feedback (*n*=1, 7%). This type of feedback was usually provided similarly at the end of each piece of written feedback, stating: 'For further feedback please consult with your module co-ordinator'. However, more feedback comments made using the audio modality aimed to encourage further study (*n*=8, 50%) than those provided in written feedback (*n*=4, 33%). Similarly, an increased amount of audio comments referred to resource materials (*n*=6, 43%) than did written comments (*n*=3, 25%). Importantly, such comments may encourage students to follow up their feedback by actively directing them to the correct materials they need to improve for future assignments.

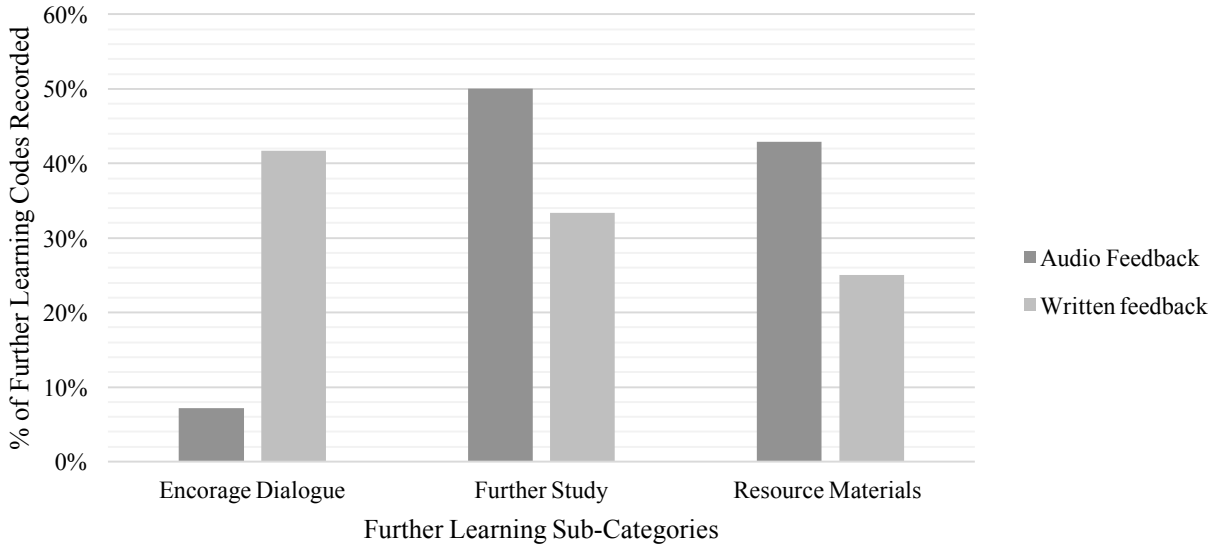

Figure 4.4 Analysis of the sub-categories of further learning feedback provided using the audio compared to the written feedback modality

A more detailed analysis of the sub-types of motivational feedback comments (see Figure 4.5) found written feedback provided slightly more praise for the students' achievement (*n*=28, 57%) than did audio feedback (*n*=23, 49%). Commonly, such praise comments in written feedback were simply in the form of 'well done' or 'good work'. However, the tutor providing audio feedback gave students slightly more motivational comments, which aimed to encourage students by providing support, confidence or hope that they may improve upon their future performance (*n*=24, 51%), than did the tutor using the written feedback modality (*n*=21, 43%). As explained by Brown and Glover (2006), this type of comment encourages positive motivational beliefs and thereby increases the likelihood students may act upon their feedback.

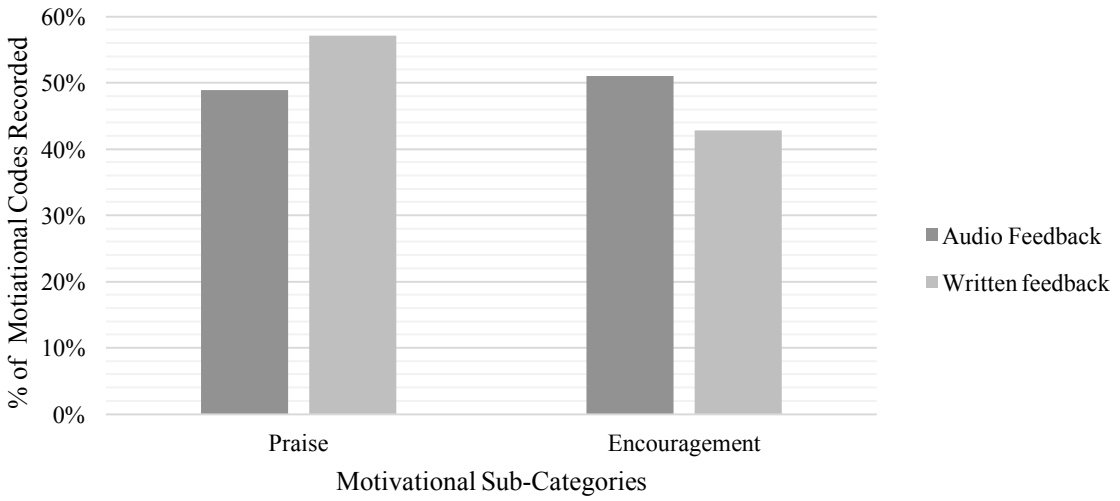

Figure 4.5 Analysis of the sub-categories of motivational feedback provided using the audio compared to the written feedback modality

4.4.3 Comparing the Depth of Audio and Written Feedback Content

An analysis of the depth of feedback given revealed greater differences between the two modalities. Focusing upon the depth of feedback provided across all comment types (see Figure 4.6), most written comments were at the level of simply acknowledging an issue (*n*=139, 65%) and less than a third of these involved either a correction (*n*=55, 27%) or an explanation (*n*=21, 10%) of why this improvement should be made. This stands in contrast to comments provided using the audio modality, as while fewer acknowledgements of issues were provided (*n*=86, 37%), these acknowledgements were often followed by more than one way of correcting the issue by their tutor (n=99, 43%) and a half were subsequently provided with an explanation (n=48, 21%) of why this correction should be made. Importantly, providing all three levels of feedback is central to enable students to make the connections between the feedback and their own assignment, so they may close the gap between their current and desired performance (Brown & Glover, 2006).

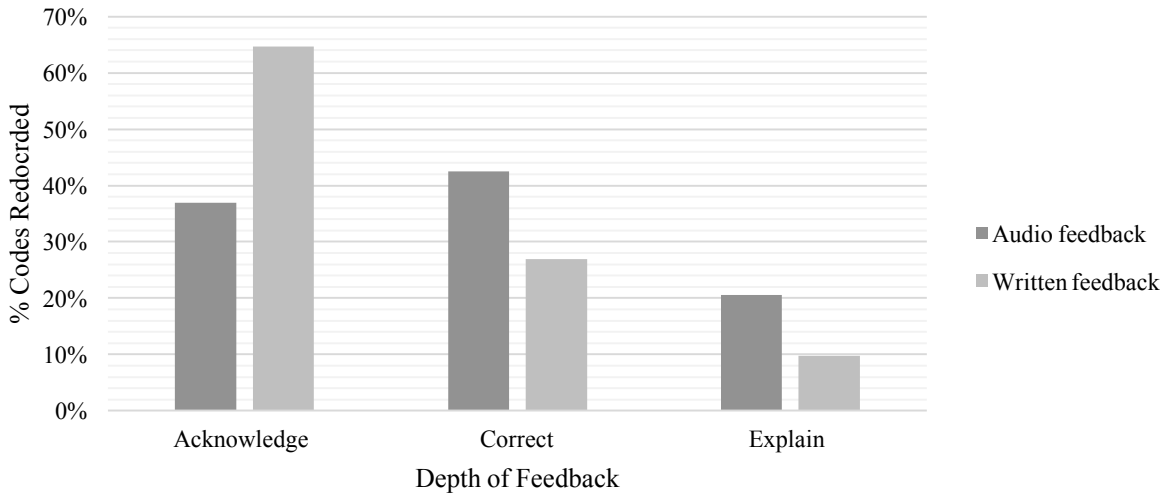

Figure 4.6 Comparison of the levels of feedback depth across all comment types provided using the audio compared to the written feedback modality

4.4.4 Comparing the Depth of Audio and Written Feedback Content by Comment Type

A detailed analysis of the depth of content feedback given revealed most of the written comments provided were only at the level of acknowledging an issue (*n*=24, 59%), rather than providing a correction of the issue (*n*=8, 20%) or explanation of why it is needed (*n*=9, 22%). In comparison, while content feedback provided using the audio modality included fewer acknowledgments (*n*=17, 35%) of issues than written feedback, it provided more depth in correcting (*n*=23, 47%) those acknowledged problems, often by outlining more than one way the student could correct their content for each issue (see Figure 4.7).

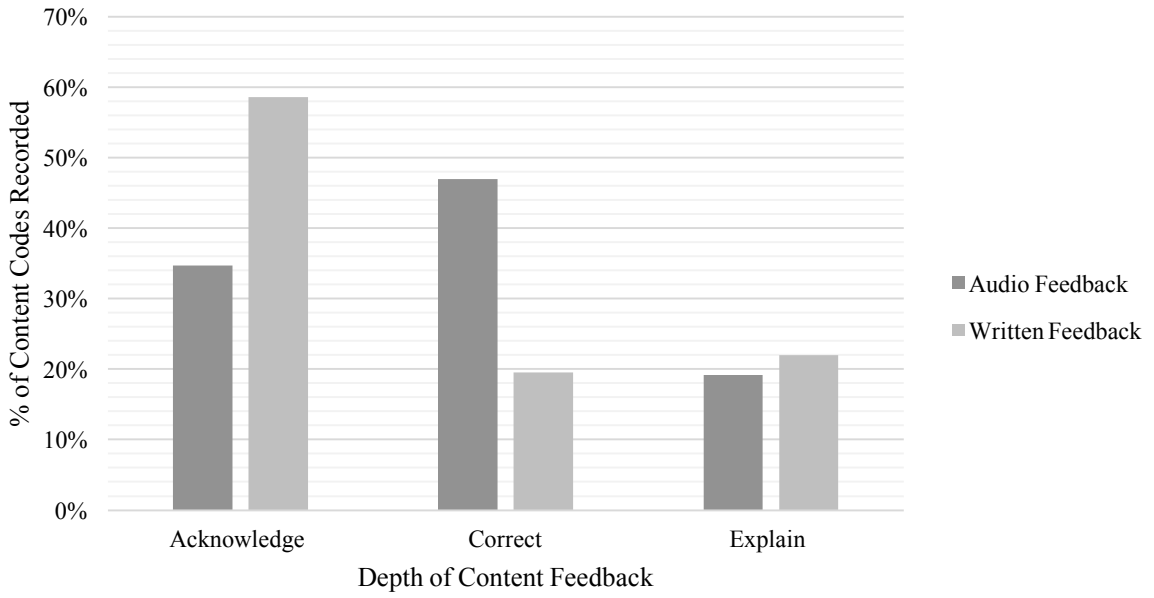

Figure 4.7 Comparison of the levels of content feedback depth provided using the audio compared to the written feedback modality

A similar trend may be observed when conducting an analysis of the depth of skills based feedback (see Figure 4.8), as feedback provided using the audio modality included fewer acknowledgments (*n*=45, 33%) of issues than written feedback (*n*=66, 54%). However, audio feedback provided more corrections for these issues (*n*=60, 44%), than did written feedback (*n*=44, 36%) and often followed with an explanation of why the correction should be made (*n*=32, 23%), more so than written feedback (*n*=12,10%). Such a depth of explanation is central when providing skills based feedback, as it is this type of feedback students most often use to feed forward into their future work (Brown & Glover, 2006).

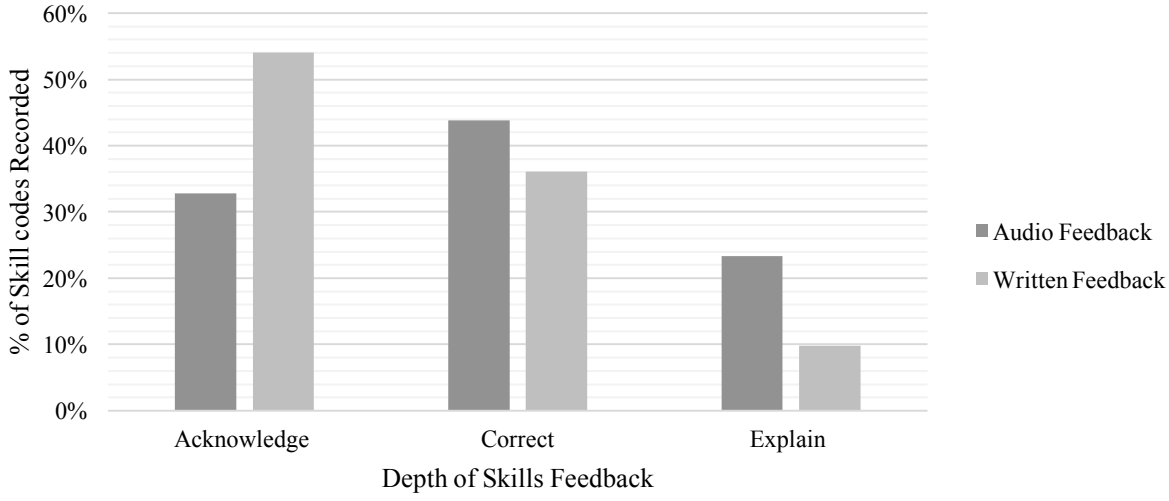

Figure 4.8 Comparison of the levels of skills feedback depth provided using the audio compared to the written feedback modality

A comprehensive analysis of the depth of motivational feedback given revealed where praise was given in written feedback (*n*=46, 94%) it was predominantly unexplained ('good', 'excellent', well done'), whereas within audio feedback this occurred to a lesser degree (*n*=24, 51%) with more comments continuing to then outline what specifically was correct about the students work (*n*=16, 34%), than in the written feedback (*n*=3, 6%). Comments provided using the audio modality also offered students with an explanation of why this was correct (*n*=7, 15%), often discussing why the issue commented upon should be included in a future assignment, whereas no written feedback reached this level of depth (see Figure 4.9).

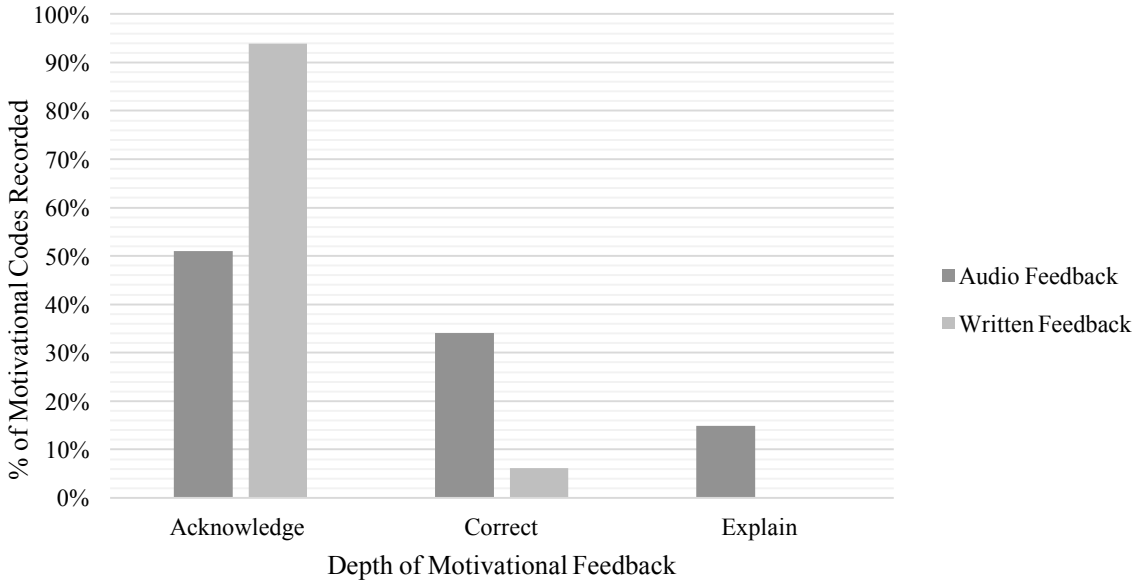

Figure 4.9 Comparison of the levels of motivational feedback depth provided using the audio compared to the written feedback modality

4.5 Discussion

The feedback analysis enabled the identification of the strengths and weaknesses of both modes of feedback provided in relation to the conditions and principles for good feedback outlined by Nicol and McFarlane-Dick (2006) and the overarching Three-Factor Framework for Dialogic Feedback (Yang & Carless, 2013). These results are discussed below in relation to the primary research question and the relevant sub-research questions presented earlier for this phase of the study. As such, this discussion will first compare the strengths and weaknesses identified across both feedback modalities regarding comment *type*, followed by a discussion of those found when analysing comment *depth*. Conclusions will be subsequently made with regards to '*what'* (i.e. type and depth of comment) tutors say when providing feedback to students using the audio as opposed to the written modality.

Importantly, as this phase of the study investigates the *content* of feedback, discussion will primarily focus upon assessing the dialogic nature of each modality in relation to the cognitive dimension of Yang and Carless' (2013) framework for dialogic feedback.

4.5.1 A Comparison of the Strengths and Weaknesses Identified in Audio and Written Feedback Regarding Comment *Type*

Firstly, the feedback analysis facilitated the identification of strengths in the type and quality of the feedback across both modalities that could encourage students to engage with their feedback and use it to improve their future work. The students received from both modalities a reasonable amount of positive *motivational* feedback and very little of the feedback given was de-motivational. This balance of motivational and de-motivational feedback is similar to that reported favourably by Brown and Glover (2006) in their original paper. As highlighted by Nicol and McFarlane-Dick (2006), this type of feedback is likely to incite positive motivational beliefs and increase self-esteem, and thereby encourage students to act upon their feedback (Yang & Carless, 2013).

When compared to skills focused feedback, students received from both modalities a relatively small amount of *content* focused feedback that is relevant only to the topics that were assessed. In interviews with students, Brown and Glover (2006) reported that this type of feedback was often not used by students to improve their work because they felt the topic they had studied was unlikely to be ever revisited. This strength suggests the feedback held a more formative nature, a position which is reinforced when considering most of the feedback arising from both modalities was *skills* focused. Skills feedback fulfils the formative function of helping students feed-forward their tutors' comments to improve their future work and learning (Brown & Glover, 2006). Yet, while both modalities contained a high proportion of skills based feedback, differences arose in the extent to which they facilitate the development of *disciplinary* specific skills, noted by Yang and Carless (2013) as a central characteristic of dialogic feedback. Here it is suggested that feedback provided using the audio modality placed less focus on non-disciplinary issues, such as spelling or grammar, and focused more so on disciplinary issues, such as the student's facilitation of critical analysis, than did feedback provided using the written modality. As such it may be tentatively suggested that the audio feedback may have gone somewhat further to help students progress in their learning by stimulating student engagement with disciplinary problems (Yang & Carless, 2013).

However, the feedback analysis also facilitated the identification of weaknesses in the type and quality of the feedback across both modalities that could discourage students from engaging with their feedback and improving their later work and learning. The students received from both modalities a small amount of feedback intended to encourage *further learning*, which specifically aims to facilitate reflection and self-regulation when receiving feedback (Nicol & McFarlane-Dick, 2006; Yang & Carless, 2013). Nevertheless, while both modalities contained a small proportion of further learning comments, differences arise between modalities when considering the extent to which students were encouraged to have an active role in processing and using their feedback. Specifically, feedback provided using the audio modality provided students with more suggestions for relevant resource materials and directions for future study, than did feedback provided using the written modality. Consequently, it may be proposed that the feedback given using the audio modality might have better provided students with the information they needed to *immediately* facilitate further reflection (Yang & Carless, 2013).

4.5.2 A Comparison of the Strengths and Weaknesses Identified in Audio and Written Feedback Regarding Comment *Depth*

The analysis of the depth of feedback given revealed further differences between the two modalities in terms of the strengths and weaknesses identified. While most of the feedback provided using the written modality was simply at the level of acknowledging a problem (Levels 1), feedback provided using the audio modality often gave students more ways to correct the issue (Level 2) and an explanation of why this correction was needed (Level 3). Similarly, with praise the written modality provided mostly unexplained feedback ('good', 'excellent', 'well done'), whereas the audio modality often explained the basis for the praise. As highlighted by Nicol and McFarlane-Dick (2006), this type of detailed feedback better enables students to become cue-conscious by building strong connections between their feedback and their previous work. Considering this, it may be suggested that students were given more opportunities when provided with audio comments to close the gap between their current and desired performance. In other words, the depth of explanation provided in the audio feedback enabled students to better interpret, process and act upon their feedback; conditions which Yang and Carless (2013) note in their framework as central to the development of dialogic feedback.

4.6 Conclusion

Chapter Four has presented and discussed the quantitative findings of phase one of the study that has primarily gone some way to address the research question *"How far might the provision of assessment feedback to students using audio recording technology encourage the cognitive features of dialogic feedback, when compared to written feedback?"* by conducting content based analysis of *what* tutors say in their feedback to students. The coding system developed by Brown and Glover (2006) provided a tool to reflect on the quality and effectiveness of the content of feedback provided to students, in light of dialogic approaches to pedagogy (e.g. Nicol & McFarlane-Dick, 2006; Yang & Carless, 2013). Accordingly, the quantitative data presented from this analysis indicates differences in both the *type* and *depth* of comments when tutors utilize the audio rather than the written feedback modality. When analysing these results in accordance to the theoretical frame (Yang & Carless, 2013), it is believed that the differences in *what* was said by the tutor providing the audio feedback may help to reinstate the features of dialogic feedback categorized into the cognitive dimension and lead to improvements in students' future learning. Furthering this analysis, the following chapter broadens the investigative focus from *what* teachers say to *how* they say it. By supplementing content analysis with a linguistic analysis of the same feedback script data, additional insight will be provided into the social-affective implications of providing audio feedback in higher education.

5 ANALYSIS OF FEEDBACK SCRIPTS: '*HOW'* TUTORS ARTICULATE ISSUES IN AUDIO FEEDBACK

5.1 Introduction

This chapter presents the methodology and quantitative findings for the second analysis of feedback script data included in this study. Specifically, the quantitative data presented in this chapter aims to go some way to answer the research question "*How far might the provision of assessment feedback to students using audio recording technology encourage the positive social-affective features of dialogic feedback, when compared to written feedback?"* by supplementing content based interpretations of feedback with a Hallidayian-inspired linguistic analysis of '*how*' tutors articulate their feedback comments. Linguistic analysis allows for an understanding of how the language used by the tutor to express their feedback may impact a student emotionally and build differing types of student-tutor relationships. After the rationale and sub-research questions for this stage of the study are provided, the method of data analysis is discussed. Importantly, this chapter does not provide in-depth detail on data collection methods for this stage of the study, as the data utilized is the same as that presented in full within Chapter Four. An outline of the analytic framework used to analyse the data is given, with annotated examples taken from the body of teacher feedback data collected in the study. The chapter then proceeds to outline the complementary quantitative results acquired from this stage of analysis and provides a short discussion concerning their relevance to help explore the dialogic potential of providing audio feedback on students' assignments in higher education.

5.2 Rationale and Quantitative Research Questions

This research understands feedback as a social construct (Evans, 2013) that is analysed as a product of the relationship between tutor and student (Hattie & Timperley, 2000; Nicol & Macfarlane-Dick, 2006). In this phase of the study, interest is held within the social-affective dimension of Yang and Carless' (2013) Three-Factor Framework to ascertain how feedback content may be subjectively interpreted by students. The research of others in this social domain (Carless, 2006; Dunworth & Sanchez, 2016; Higgins, Hartley & Skelton, 2002; Orsmond & Merry, 2011), investigates the role and function of feedback to undergraduate students from the dialogic perspective of interpersonal positioning (see Varlander, 2008 and Evans, 2013 for reviews of interpersonal positioning). This perspective understands feedback as a form of dialogue encapsulating various *evaluative language* resources, which each hold

the purpose of mediating the way in which feedback is communicated intersubjectivity between the student and the assessor (Hu & Choo, 2015). While samples and methodologies differ in research adopting this theoretical orientation, some studies (e.g. Austin, 2016; Hu & Choo, 2015; Mutch, 2003) have systematically analysed the role and function of evaluative language in *written* feedback, using analysis inspired by Halliday's systemic functional linguistics (e.g. Martin & White, 2005). This form of analysis argues that the tutors' stance regarding the students whose work they assess, together with the dyadic relationship created between tutors and students, can be identified largely through the lexico-grammatical choices made in the written comments provided. If categorized under the framework for dialogic feedback (Yang & Carless, 2013), previous feedback literature may infer that the evaluative language resources employed by tutors in their *written* comments are highly *monologic* in nature, as they commonly suggest the tutors lack of sensitivity to students' emotional responses and create increasing feelings of an unequal discursive relationship (Austin, 2016). As such, conceptual literature argues the need to reinstate a sufficiently dialogic and rich form of communication between students and tutors in higher education, to remove the communicative tensions embedded within written feedback practice (Austin, 2016; Nicol, 2010; Yang & Carless, 2013).

In order to address this issue, a new avenue of research appears to be investigating the potential impact of providing *audio*, as opposed to *written*, feedback on the lexico-grammatical choices employed by tutors and the role and function those choices may have for students. This interest stems from the speech-writing dichotomy explored in language variation studies, which rely on comparison in order to identify variety-specific features (Tagg, 2009). The dichotomous relationship between spoken and written language is well documented (Biber, 1988; Halliday, 1985/1989) and is of relevance to dialogic theory (Bakhtin, 1981). Table 5.1, below summarises the dichotomous differences between spoken and written forms of communication identified in the linguistic literature.

Speech	**Writing**
Dialogic	Monologic
Aural	Visual
Informal	Formal
Low social evaluation	High social evaluation
Shared knowledge between participants	Shared knowledge not assumed
Shared time and space	Separated in time and space
Interactional purpose	Ideational purpose
Unedited	Edited

Table 5.1 The speech-writing dichotomy (adapted from Tagg, 2009, p. 34)

Considering this, the dichotomy represents perceptions of writing as academic and speech as comprising of everyday conversation (Tagg, 2009). The idea of face-to-face conversation as the basic form of language against which others can be measured is also a persistent one, found in Crystal and Davy (1969), for example, who understand conversation as a 'benchmark' for the analysis of other varieties of evaluative language representation. Importantly, the features outlined in Table 5.1, shape the lexico-grammatical features typically perceived in written and spoken forms of evaluative language (Chafe, 1982; Chafe & Tannen, 1987; Halliday, 1985/1989). The main features of which are summarized in Table 5.2 below.

Speech	**Writing**
Non-fluency features such as hesitations, false starts, self-corrections, repetitions and fillers.	Lack of errors or visible self-corrections. Writing is more organised and structured than speech.
Dialogic in formulation (i.e. meaning may be negotiated) and the recognition of other speakers' value positions (Informed by Bakhtin, 1981 and Yakubinsky & Eskin, 1997 [1923])	Essentially monologic, making fewer references to other voices and viewpoints.
Use of hedging, as speakers pursue communicative goals with respect to a second party (Brazil 1995: 29)	Writing is often expression of content, rather than maintenance of social relations.
High frequency of personal pronouns (e.g. I, You, We)	The use of the passive construction
A high number of verbs	Nominalization
Everyday vocabulary that is often informal or colloquial in nature	More formal and topic specific vocabulary
Prosodic features such as intonation, stress, loudness	Graphic features such as punctuation, capitalisation and paragraphing

Table 5.2 Linguistic features of spoken and written evaluative language (adapted from Tagg, 2009, p.34)

The linguistic features presented in Table 5.2 are described as being shaped by different constraints on evaluative language production within the conditions for which speech and writing are produced. Halliday (1985/1989), by focusing upon the different social functions of written and spoken evaluative language, begins to highlight the significance of situational factors in communication. The validity of distinctions between spoken and written evaluative language provides a conceptual starting point for investigation, in that situational features should now be extended to consider the role of technology in blurring the distinctions

between face-to-face synchronous spoken language and distanced asynchronous written language (Baron, 1998b). The impact of technology, such as the voice recording technology of interest in this project, on clouding distinctions between conversation and writing are better encapsulated within spectral descriptions of language and dialogicality.

The idea that varieties of evaluative language expression can be placed along a spectrum of spoken and written varieties according to situational variables, draws on Malinowski (1922) and partisans Firth (1935) and Halliday (1985). Biber (1988), whose analysis of the dichotomy between typical writing and speech situations, identifies various dimensions on a scale along which to categorise evaluative language varieties. The scale dimensions outlined by Biber (1988), on a basic level, conform to those linguistic characteristics outlined in Table 5.2. The effect of technology on the production of spoken and written evaluative language is frequently accommodated along the speech-writing continuum (Baron, 1998a), in studies that conceptualise technology-mediated channels as obscuring distinctions between speech and writing. For example, speech has been reported as mediated through technologies, such as the radio and voice mail messages, with corresponding effects on the evaluative language resources employed, caused by factors concerning the separation in time and space among speakers (Baron, 1998b). Importantly, this research could go some way to suggest that tutor feedback provided using the audio recording software, may be accommodated along the speech-writing continuum differently to that of classic written feedback. If so, research is needed to understand the lexico-grammatical choices made by markers when providing audio comments, as opposed to written comments, and the role and function such choices may serve when constructing the dyadic relationship between tutor and student.

In response to the research gaps identified above, it is suggested that the contribution of providing feedback using different modalities may be more fully explicated if researchers augment content based interpretations of this phenomenon with Hollidayian-inspired linguistic analysis (e.g. Martin & White, 2005). Such analysis would broaden the investigative focus on *what* teachers say to *how* they say it. This is not to suggest that linguistically-based analysis of feedback modality should replace content based analysis, but rather that the systematic linkage of aspects of modality to the lexico-grammar of feedback discourse will provide the field with an additional analytic insight into the complex *social action* of providing and receiving feedback in higher education. Thus, this study focuses on the use of evaluative language by tutors when providing audio, compared to written, feedback on students' assignments. Following Martin and White (2005, p.1), we define evaluative

language as the various linguistic resources employed to construct 'interpersonal' meaning. Specifically, this refers to *how* tutors express their emotions, make normative assessments and embed authorial identities or personae in the feedback they provide to their students. Evaluative language merits attention because it can shape the focus of teacher feedback, mediate the way in which feedback is communicated inter-subjectively and affects students' reception and engagement with tutor feedback (Hu & Choo, 2015). Importantly for this study, it strongly bears on what Yang & Carless (2013) purposed when outlining the social-affective dimension, in that "feedback in its most productive form is experienced as a social and relational process in which dialogic interaction within a trusting atmosphere can help to promote learner agency and self-regulation" (p. 290). In consideration, this study aims to investigate whether and how the modality used to provide feedback may impact tutors use of evaluative language in feedback. The following sub-research questions have been formulated to guide the study:

1. Are there similarities/differences in the occurrence of evaluative language resources employed by tutors providing feedback using audio and written modalities?

2. Are there similarities/differences in the variation of evaluative language resources employed by tutors providing feedback using audio and written modalities?

5.3 Methodology

5.3.1 Data

The data employed for this analysis were the same as that previously reported in Chapter Four and used to conduct a content analyses of feedback scripts given to students. This stage of the study simply conducts a further level of analysis upon the same data set. To provide a short overview, this data consisted of feedback reports on students' summative assignments submitted for a Criminology module at Aberystwyth University, whereby one tutor chose to provide students audio feedback and the other chose to provide students with written feedback. In total 28 feedback reports were selected to be used within the analysis, 14 of those provided using the audio modality and 14 provided using the written modality. Important for this stage of the research, all audio files were transcribed orthographically to generate a verbatim record of what was spoken by the tutor, which included lexico-grammatical features such as repetitions and false starts.

5.3.2 Analytic Framework

To address the research questions, appraisal theory is drawn upon as an analytic framework. Appraisal theory, thoroughly explained in Martin and White (2005), is grounded in systemic functional linguistics (Halliday, 1994) and is focused on understanding the language of evaluation, that is, the linguistic resources employed to construct interpersonal meaning. Appraisal theory divides evaluative language resources into three fields: attitude, engagement, and graduation. Where available, examples are taken from the body of teacher feedback used within this study to illustrate the use of evaluative language resources. These examples are provided with codes, for example AF/1, where the first two letters stand for the type of feedback provided (AF = Audio Feedback; WF = Written Feedback) and the number distinguishes the piece of feedback in which the example was taken.

5.3.2.1 Attitude

'Attitude' is focused upon language resources that are used to convey "emotional reactions, judgements of behaviour and evaluation of things" (Martin & White, 2005, p. 35). In appraisal theory, attitude comprises of three subsystems with their various categories, which are presented visually in Figure 5.1. 'Affect' is concerned with registering positive and negative emotional reactions or feelings. Four categories of emotional affect are outlined. 'Dis/inclination' expresses a desire for something or an emotive mental process of avoidance. To demonstrate, an inclination evaluation made in tutor feedback is provided in Example 1. 'Un/happiness' covers positive emotions of joyfulness and affection alongside negative emotional reactions such as sadness. An Illustration of happiness is provided in Example 2. 'In/security' is characterized by positive feelings of confidence or negative emotions of anxiety and unease. Finally, as demonstrated in Examples 3 and 4, 'dis/satisfaction' concerns "feelings of achievement and frustration in relation to the activities we are engaged in, including our roles as both participants and spectators" (Martin & White, 2005, p. 50).

Examples 1-4:

1. An interesting take on the subject and one I was looking forward to [Affect : Inclination +] reading. (AF/8)
2. In fact it was a joy [Affect: Happiness +] to read. (AF/4)

3. I am very pleased [Affect : Satisfaction +] with your referencing…(AF/2)
4. It is disappointing [Affect: Dissatisfaction-] that you did not take advantage of this opportunity. (WF/7)

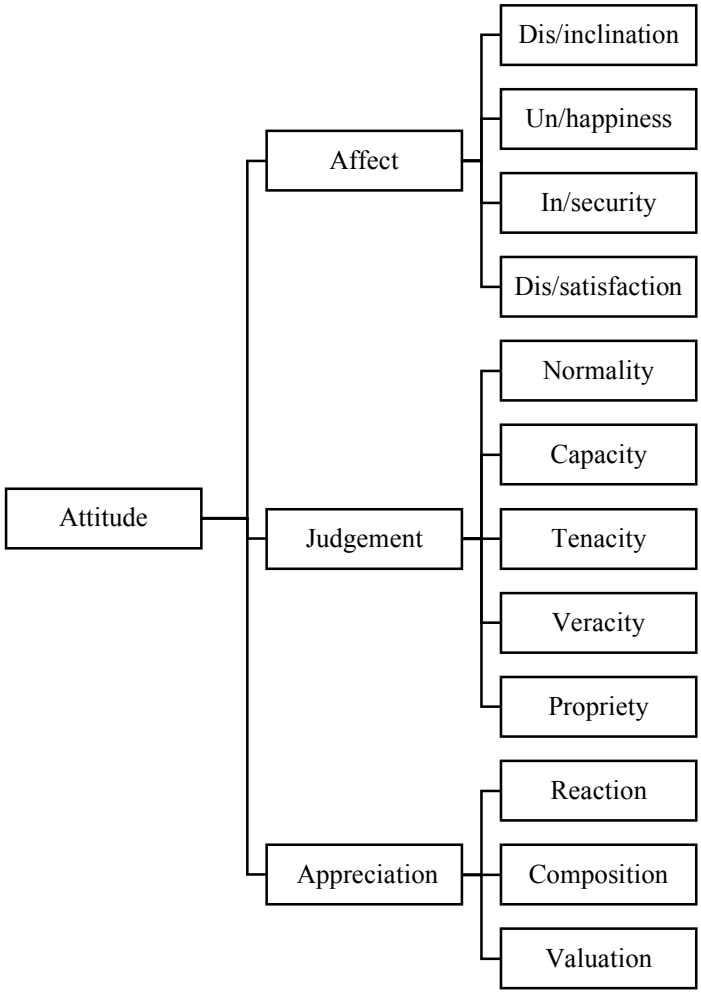

Figure 5.1 Categories of Attitude (based on Martin & White, 2005)

The second subsystem of 'Judgement' is concerned with attitudes towards human behaviour or dispositions "which we admire or criticize, praise or condemn" (Martin & White, 2005, p. 42), and comprises of five types of evaluation. 'Normality' encompasses positive and negative judgements of how special or customary someone's behaviour is. 'Capacity' incorporates linguistic resources for expressing how capable/competent or incapable/incompetent someone is. Positive and negative evaluations of capacity made in tutor feedback are provided in Examples 5 and 6. 'Tenacity' includes positive and negative evaluations of how dependable or persevering an individual's behaviour or mental disposition is. Judgements made under the subsystem of 'veracity' involve positive and negative evaluations of how honest or truthful someone is. The final resource of judgment, 'propriety',

encompasses positive and negative judgements of morality, that is how ethical someone's behaviour is.

Examples 5-6:

5. 9. You have done well [Judgement: Capacity +] to consider IQ testing… (WF/5)
6. 10. You are not using Harvard Referencing in a correct [Judgement: Capacity -] way. (WF/13)

The last subsystem of attitude, 'appreciation', concerns the positive and negative evaluations of products, processes, objects, and states of affairs rather than human behaviour. In essence, appreciation encompasses three sub-systems for linguistic resources that convey an individual's evaluation of the quality, composition, and value of non-human entities. 'Reaction' incorporates positive and negative assessments of the quality or impact of a product, object or process. Examples 7 and 8 demonstrate tutor reactions made in assignment feedback. Similarly, appreciation may be achieved through assessing the 'composition' of an object, product or process in terms of balance, complexity and makeup. Illustrations of composition evaluations in tutor feedback are provided in Examples 9 and 10. Finally, as demonstrated in Examples 11 and 12, 'valuation' incorporates positive and negative evaluations of products, processes and objects in terms of their worth and usefulness.

Examples 7-12:

7. It exhibits excellent [Appreciation: Reaction +] insight into the material…(WF/13)
8. It seems odd [Appreciation: Reaction -] that this has taken up the majority of the content. (AF/7)
9. The structure of the work is clear [Appreciation: Composition +]…(WF/3)
10. These paragraphs are slightly incoherent [Appreciation: Composition -]…(AF/9)
11. The sources that you have used are to a very high standard [Appreciation: Valuation +]. (AF/2)
12. You have a limited bibliography [Appreciation: Valuation -]…(WF/2)

5.3.2.2 Engagement

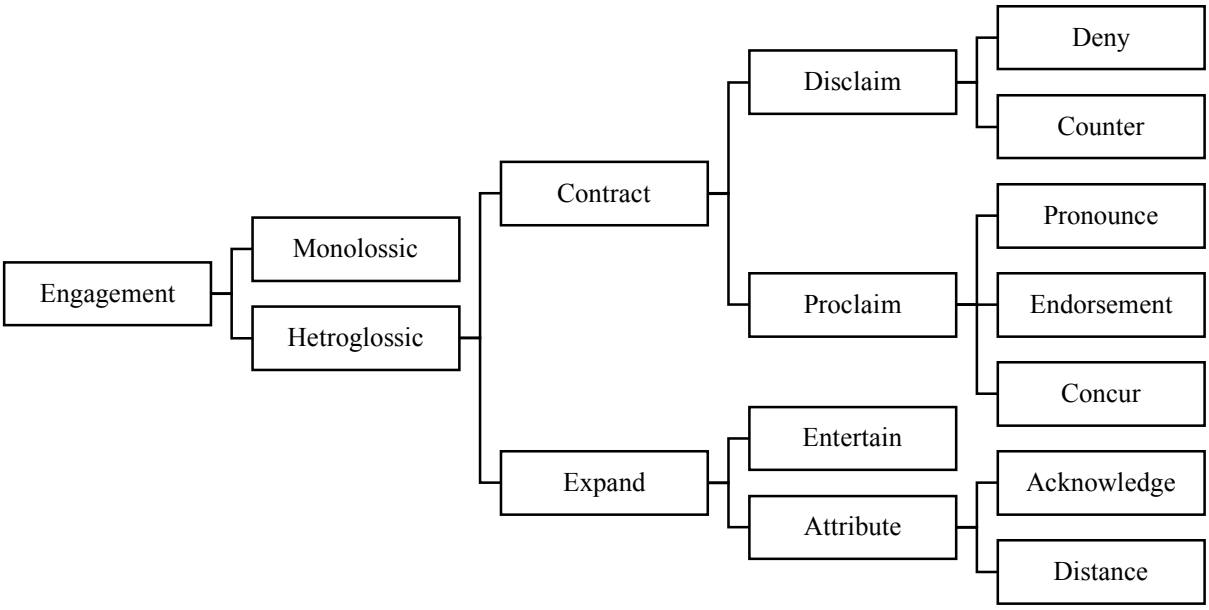

Figure 5.2 Categories of Engagement (based on Martin & White, 2005).

Engagement concerns those language resources used for social dialogistic positioning, that is, how linguistic resources are used to source the speakers' acknowledgement of alternative viewpoints; referred to as Monoglossic or Hetroglossic discourse after Bakhtin (1981). In Appraisal theory, engagement comprises of two subsystems, which then may be further subdivided so to identify the specific dialogistic positioning of the author or speaker. Figure 5.2 presents such subsystems visually so allow the reader to more easily understand the origin of each sub-code. Following Figure 5.2, under engagement, utterances first are classified as either 'Monoglossic' if "they make no reference to other voices and viewpoints" or 'Hetroglossic' if "they invoke or allow for dialogistic alternatives" (Martin & White, 2005, p. 100). Monoglossic utterances are often referred to as 'undialogised' or as 'bare assertions' and are inter-subjectively neutral, objective or factual. Coding of Monoglossic utterances revealed in tutor feedback is exhibited in Examples 13 and 14 below.

Examples 13-14:

13. This essay looks at [Monoglossic] both biological psychology and cognitive psychology. (AF/12)
14. Your essay is [Monoglossic] just over 2000 words. (WF/4)

However, as shown in Figure 5.2, hetroglossic resources may be further divided into two broad categories, according to whether the utterance actively makes allowances for dialogically alternative viewpoints (dialogic expansion), or alternatively, acts to restrict, close-down or challenge such viewpoints (dialogic contraction). To explore 'dialogically expansive' formulations, Martin and White (2005) first term 'entertain' to refer to those resources whereby an authorial voice indicates its position to be one among many viewpoints and thus, to greater or lesser degrees, allows for dialogic alternatives. To demonstrate, evaluations of entertain revealed in tutor feedback are provided by Examples 15 and 16. Similarly, dialogic expansion may also be achieved through 'attribution', whereby the authorial voice may 'acknowledge' or 'distance' the voice of an external source. An Illustration of attribution found in tutor feedback is provided in Example 17.

Examples 15-17:

15. You could have [Entertain] have developed the discussion. (WF/4)
16. The one aspect that I think [Entertain] is missing… (AF/4)
17. In subsequent research [Attribute: Acknowledge] they have been found…(AF/5)

The resources of 'dialogic contraction' include the two broad categories of 'disclaim' and 'proclaim' which both act to restrict the scope for dialogic alternatives using different linguistic means. Disclaim encompasses those utterances whereby an alternative viewpoint is directly rejected or presented as unsustainable. Two subtypes of disclaim have been identified. 'Deny', or negotiation, is a resource for acknowledging an alternative proposition in the dialogue, only to reject it; as demonstrated within tutor feedback in Examples 18 and 19. The second subtype of disclaim includes values which suggest the current proposition replaces or supplanting, and thus 'countering', an anticipated proposition. Examples 20 and 21 exemplify the use of countering in tutor feedback.

Examples 18-21:

18. You don't [Disclaim; Denial] actually go into much detail…(AF/11)
19. Citing is not [Disclaim: Denial] consistently executed. (WF/7)
20. Some relevant information, but [Disclaim: Counter] it is of limited quantity. (WF/8)
21. However [Disclaim: Counter], the overall writing and structure of the assignment is quite cumbersome. (AF/11)

Rather than directly rejecting or overriding a conflicting viewpoint, those formulations grouped under the heading of 'proclaim' act to limit the scope for dialogic alternatives more subliminally throughout the dialogue. Three subtypes of proclamation have been identified. The subcategory of 'concur' groups resources which suggest the addresser as agreeing with, or having the same belief as, as the dialogic recipient or partner, as demonstrated within tutor feedback in Examples 22 and 23. The second subtype, 'endorsement' embodies those resources whereby propositions sourced to external others are depicted by the authorial voice as undeniable, correct or otherwise outstandingly justifiable. Verbs such as *show* and *demonstrate* residing in this subtype have been discussed in terms of the notion of 'factivity' (Martin & White, 2005). Examples 24 and 25 exemplify endorsements made in tutor feedback. The final category of 'pronounce' outlines linguistic means which place authorial emphasis or interventions. Pronouncements found in tutor feedback are illustrated in Examples 26 and 27.

Examples 22-27:

22. You have [Proclaim: Concur] outlined both evolutionary and social psychology…(WF/6)
23. You did [Proclaim: Concur] look into some theories…(AF/12)
24. An informed discussion that demonstrated [Proclaim: Endorse] a good knowledge of the subject…(WF/10)
25. Complicated essays I have read show [Proclaim: Endorse] that you really need the entire word count… (AF/7)
26. A major concern for your essay writing is [Proclaim: Pronounce] poor sentence structure. (WF/3)
27. The fact [Proclaim: Pronounce] that you picked a few different traits…(AF/1)

5.3.2.3 Graduation

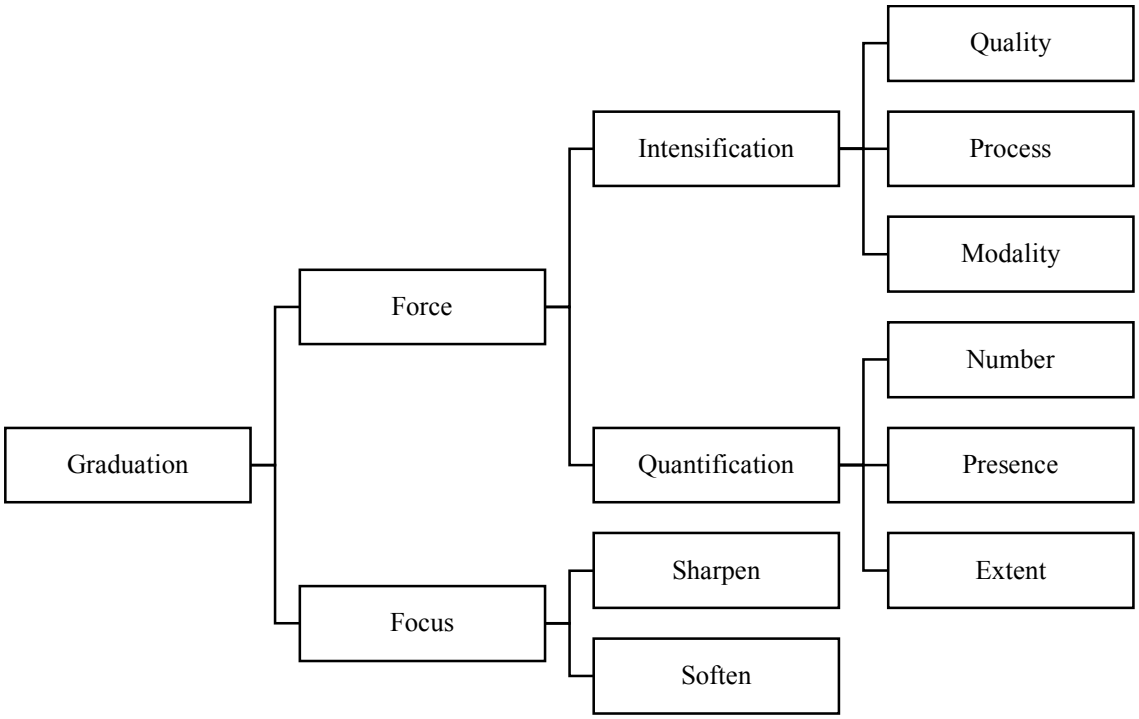

Figure 5.3 Categories of Graduation (based on Martin & White, 2005)

Graduation focuses upon those language resources for scaling or grading the force of an interpersonal evaluation. Focusing upon attitude, graduation attends to how language may be used to adjust the degree of an evaluation, that is, how strong or weak a feeling or opinion is. This kind of graduation is referred to as 'force' and utilises resources, such as repetition, to 'rise' or 'lower' the degree of an evaluation. Martin and White (2005) also discuss graduation in the context of non-gradable resources, a system called 'focus', suggesting these resources have the effect of altering the strength of boundaries between categories and forming core qualities of things by 'sharpening' or 'softening' the degree of an evaluation. Coding of 'sharpening' or 'softening' utterances revealed under focus in tutor feedback are shown in Examples 28 and 29 below.

Examples 28-29:

28. You included the ACTUAL [Focus ↑] research into your points. (AF/1)
29. You don't REALLY [Focus ↓] say what the point of this paragraph is…(AF/2)

As visually exemplified in Figure 5.3, the gradable features encompassed by the graduation system are then further developed to subcategories. As previously outlined, 'force' covers the assessments made by the authorial voice as to the degree of intensity and

amount. Assessments as to the degree of intensity have been further divided into three sub-types. Intensity may be emplaced over qualities of an individual's behaviour and the evaluation of things. The up-scaling and downscaling of qualities found in tutor feedback are illustrated in Examples 30 and 31. Assessments of the degree of intensity also arise over 'processes' which form under the engagement values previously discussed. The upscaling and downscaling of these viewpoints in tutor feedback are illustrated in Examples 32 and 33. The final subtype of intensity concerns 'modalities' of "likelihood, usuality, inclination and obligation" (Martin & White, 2005, p. 140). The scaling of modality found in tutor feedback are exemplified in Examples 34 and 35.

Examples 30-35:

30. I STRONGLY [Force: Intensification - ↑ Process] urge you to seek guidance on this… (WF/1)
31. Your writing is A BIT [Force: Intensification - ↓ Quality] too descriptive. (WF/1)
32. Each individual section is written VERY [Force: Intensification - ↑ Quality] clearly written. (AF/4)
33. The second issue I WOULD SAY [Force: Intensification – ↓Process] is with the referencing…(AF/6)
34. I think you SHOULD [Force: Intensification - ↑ Modality] have conducted more research. (WF/2)
35. Your overall writing COULD [Force: Intensification - ↓ Modality] do with some further consideration (AF/10).

Similar to intensity, assessments of amount or quantification may also be further divided into three subtypes. Quantification may provide for the loose measuring of 'number'; examples of which found in tutor feedback are provided in Examples 36 and 37. The degree of 'presence' also is found within the sub-system of quantification. The upscaling and downscaling of presence in tutor feedback are illustrated in Examples 38 and 39. Finally, the 'extent' of an entity is considered, with illustrations in tutor feedback provided in Examples 40 and 41.

Examples 36-41:

36. It is essential that you reference ALL [Force: Quantification - ↑ Number] of your work appropriately. (WF/5)
37. I would definitely suggest reading a FEW MORE [Force: Quantification - ↓Number]…(AF/10)
38. There is VERY [Force: Quantification – ↑Presence] little analysis of the source material. (WF/2)

39. The majority of your paper just dedicated to this one SMALL BIT [Force: Quantification- ↓ Presence]. (AF/10)
40. You need to reconsider your use of punctuation in PLACES [Force: quantification- ↓ Extent]. (WF/13)
41. You need to make sure that you are reading WIDELY [Force: quantification - ↑ Extent]…(AF/7)

5.3.3 Data Coding and Analysis

The 28 feedback reports from the participant teachers were imported into Microsoft Word (version 15.33), which can be used to annotate smaller texts manually (De Groot & Hagoort, 2016). Manual annotation felt necessary due to the interest in tutors' use of evaluative language resources, in which the context of the appraisal as well as the object of appraisal needs to be considered. As outlined by Martin and White (2005), "when it comes to language use in context, it is often the case that a given lexical item will vary its attitudinal meaning according to that context" (p. 52).

Upon coding the feedback reports in accordance to appraisal theory, analysis was undertaken by utilising a rationale embedded within corpus linguistics rather than narrative linguistics (see Belz, 2003, for a similar analytical move when using appraisal theory). This analytical move was made, not only when reflecting upon the applicability of the approach to directly address the research questions, but also given the practical consideration of time when analysing such large amounts of feedback data. To provide an outline, corpus linguistics is the study of language through empirical analysis of databases containing naturally occurring language, referred to as *corpora* or, in its singular form, *corpus* (McEnery & Hardie, 2011). The rationale behind this approach is that the corpora form a representative sample of language produced and, therefore, can be compared and analysed using descriptive or inferential statistics to expose potential differences in the processes underlying language production (De Groot & Hagoort, 2016). The object of statistical analysis in corpus linguistics can be encoded in the corpus data itself, rather than just raw word forms, and visually presented as an *annotation* or a *tag* to denote significance to an area of interest (McEnery & Hardie, 2011). For example, in this research we may have seen the word '*joy*' in the sentence '*It was a joy to read'* and we would assign a tag for the category 'Affect: Happiness +' of appraisal theory in that context.

To determine possible effects of feedback modality upon the *occurrence* of evaluative language resources employed in teacher feedback, descriptive and inferential statistics were

used to assess the incidence of the various types of evaluation represented in each subsystem constituting appraisal theory within both corpora. Frequency profiling is used to visually present the raw rates of appraisal arising in each individual system in appraisal theory (e.g. Attitude) and this is further broken down into the individual subsystems' (e.g. Affect) various categories (e.g. Dis/Inclination). However, considering tutors providing audio and written feedback produced slightly different amounts of feedback to students, the frequency of their appraisals were normalised according to an absolute value for the purpose of relative comparison (see Belz, 2003, p. 85, for an identical analytical move). Therefore, alongside raw frequency counts of appraisals made in each corpus, a normalised frequency is reported of the rate of appraisals made per 100 words for each subsystem and subcategories.

To better understand and characterise the frequency data, the significance of any potential differences in appraisal occurring between the two feedback corpora was assessed using the Log-Likelihood test (Cressie & Read, 1984). The test used in this study is derived from research by Cressie and Read (1984) and cited in Rayson and Garside (2000), rather than that formulated by Dunning (1993). This is as the measure adjusts the likelihood ratio for unequal numbers of parameters, or in this case slightly different size corpora, so to ensure bias does not arise toward the larger corpus (Glover, 2018). Furthermore, the Log-Likelihood test is preferred by corpus linguists as it makes no assumption of normal distribution of linguistic features (McEnery & Hardie, 2011). Rayson (2016, June 4) has since developed an online analysis system for calculating the Log-Likelihood ratio, which was utilised for the purpose of this analysis. Following Rayson and Garside (2000) and others (e.g. Glover, 2018), λ is used to denote the test statistic and statistical significance was accepted at $p < .05$. Important to note, this statistical measure was utilised on raw frequency counts of appraisals made in each overarching subsystem of appraisal theory (e.g. Affect) and not on each subsystem's various categories (e.g. Dis/Inclination). This analytical move not only allowed for the reporting of specific data relevant to the aims of the project, but also reduced the likelihood that the raw frequencies would be too low to allow reliable statistical analysis.

To determine possible effects of feedback modality upon the *variation* of evaluative language resources employed in teacher feedback, descriptive statistics were used to assess the linguistic complexity and richness of language used in each subsystem constituting appraisal theory within both corpora. Variation is often measured in corpus linguistics through frequency profiling and calculating the token/type ratio (McEnery & Hardie, 2011). In this literature, the type/token ratio is solely the number of types of tokens (unique word forms) divided by the number of tokens (each word regardless of repetition) in the whole

corpus and multiplied by one-hundred (Baker, 2006). The closer this result is to 1, or 100 if presented as a percentage, the greater the lexical diversity and vocabulary variation. However, due to the annotated or tagged nature of the analytic framework used to assess the corpora in this research, the unit of analysis is further divided from examining variation of language in the *whole* corpora to focusing more directly on examining variation of language in *sub*-corpora; that is language constituting codes residing in individual subsystems of appraisal theory. Importantly, token type is used to refer to unique word forms (singular words) and formulations (multiple words) that equate to a code under the analytic framework, which differs to that formulation of token type used in unannotated corpora (McEnery & Hardie, 2011).

Considering this, the type/token ratio adopted for use in this research is simply the number of types of tokens (word formulations) represented as codes in any given category divided by the total frequency of codes that constitute the sub-corpus and represented as a percentage. As with use with unannotated corpora, the closer this result is to 100 the greater the lexical diversity or vocabulary variation. A category of appraisal coded within a corpus with a low type/token ratio will contain a greater amount of repetition and may be assumed to contain relatively simplistic language, whereas a higher type/token ratio suggests that a more diverse form of language is being employed (Baker, 2006). It has been suggested that the token/type ratio varies in accordance to the length of the corpus and that a standardized version of this measures should be used (McKee, Malvern & Richards, 2000). However, this criticism applies to the measures use with lengthy corpora and is said to be highly applicable to smaller corpora, consisting of less than 5000 tokens, like the sub-corpora utilized in this research (Baker, 2006). Frequency profiling is used alongside the token/type ratio, so to visually present the variation in token types (unique word formulations) coded within the corpora for each subsystem of appraisal, which allows for observations to be made concerning the individual linguistic techniques (e.g. colloquial register) employed by the tutors where necessary.

5.4 Findings

5.4.1 Comparing Attitude Appraisals in Audio and Written Feedback

A numerical summary of appraisals made by tutors when providing written as opposed to audio feedback with respect to ATTITUDE is provided in Table 5.3. In the horizontal quadrant of Table 5.3, Attitudinal rates are broken down into the individual subsystems of this category: AFFECT, JUDGEMENT, and APPRECIATION. In every case, data resulting

	Audio Feedback		Written Feedback	
	Frequency Count	Rate Per 100 Words	Frequency Count	Rate Per 100 Words
Affectual Appraisal				
Dis/Inclination				
Positive Inclination appraisal	2	0.04	0	0.00
Negative dis/Inclination appraisal	4	0.09	0	0.00
Un/happiness				
Positive happiness appraisal	1	0.02	0	0.00
Negative unhappiness appraisal	0	0.00	0	0.00
Dis/satisfaction				
Positive satisfaction appraisal	1	0.02	0	0.00
Negative dissatisfaction appraisal	3	0.07	2	0.06
Total Affectual Appraisal	**11**	**0.27**	**2**	**0.06**
Positive affectual appraisal	**4**	**0.09**	**0**	**0**
Negative affectual appraisal	**7**	**0.17**	**2**	**0.06**
Judgement Appraisal				
Capacity				
Positive capacity appraisal	6	0.14	20	0.69
Negative capacity appraisal	0	0.00	2	0.06
Total Judgement Appraisal	**6**	**0.14**	**22**	**0.76**
Positive judgement appraisal	**6**	**0.14**	**20**	**0.69**
Negative judgement appraisal	**0**	**0.00**	**2**	**0.06**
Appreciation Appraisal				
Reaction				
Positive reaction appraisal	28	0.69	21	0.73
Negative reaction appraisal	2	0.49	0	0.00
Composition				
Positive composition appraisal	18	0.44	8	0.27
Negative composition appraisal	29	0.71	20	0.69
Valuation				
Positive valuation appraisal	10	0.24	21	0.73
Negative valuation appraisal	18	0.44	30	1.04
Total Appreciative Appraisal	**105**	**2.59**	**100**	**3.47**
Positive appreciative appraisal	**56**	**1.38**	**50**	**1.73**
Negative appreciative appraisal	**49**	**1.21**	**50**	**1.73**

Table 5.3 Occurrence Summary of Attitudinal Appraisal

from each subsystem's various categories is presented alongside the overall combined results for that subsystem, which is subsequently divided into both positive and negative poles. For both audio and written feedback modalities, raw numerical counts of the number of appraisals made in each corpus are given in the first vertical data column. In the second vertical column for each feedback corpus, the rate of appraisals per 100 words for each subsystem and subcategories are reported.

To better understand and characterise the frequency data, log-likelihood tests were conducted using data for total positive and negative appraisals made within each subsystem: AFFECT, JUDGEMENT, and APPRECIATION. As some raw frequencies were too low to allow reliable statistical analysis the following types of attitudinal appraisal were analysed statistically: positive judgement appraisal (b) positive appreciative appraisal and (c) negative appreciative appraisal.

Based on these results, tutor feedback provided in audio and written modalities appear quite similar in their rates of positive appreciative appraisal at 1.38 and 1.73 evaluations per 100 words. Considering this, there were no significant differences in the rates of positive appreciative appraisal between the two corpora ($\lambda = 1.37$, $P > 0.05$). Similarly, audio and written modalities have nearly the same rate of negative appreciative appraisal at 1.21 and 1.73 per 100 words, yielding no significant difference in rates of negative appraisal between the two corpora ($\lambda = 3.23$, $P > 0.05$). However, marked differences in relative rates of appraisal become clear when considering positive judgement appraisals made in both corpora. Tutor feedback provided using the audio modality made 0.15 positive judgement appraisals per 100 words, in comparison to 0.70 per 100 words made in the written feedback corpus. This represents a statistically significant difference in rates of positive judgement appraisal between the two corpora, in that written feedback made more positive evaluative judgements of students than did audio feedback ($\lambda = 13.50$, $P < .001$). Interestingly, in providing this type of appraisal the tutor giving the written feedback aims judgement more so at the student *themselves*, rather than at evaluating the students' *work*.

Frequency profiles and token/type ratios were conducted using combined total data from the subsystems of AFFECT, JUDGEMENT, and APPRECIATION. This data was then pooled under the systems overarching classification of ATTITUDE and divided into the central streams of positive and negative appraisals made by both tutors. Frequency profiling is used to visually present the variation in token types (unique word formulations) coded within the corpora for positive and negative attitudinal appraisal. As evident in Appendix H, the unique word formulations constituting the sub-corpus of positive appraisals made in

audio feedback are presented, listed from most frequently occurring and descending to the least frequent. Alongside raw frequency of occurrence, Appendix H also ranks these token types and presents the percentage of which the token type forms the coded system of attitudinal appraisal within the analysis. In order to present this succinctly within the text, Table 5.4 provides the top ten ranked positive attitudinal appraisals in the audio feedback corpus.

The most highly ranked and most frequently occurring positive attitudinal appraisal expressed in the audio feedback corpus is the adjective 'good' with a frequency of 7. This most frequent token constitutes quite a small proportion of the codes presented within this system, representing only 10.6% of all positive attitudinal appraisals made within the audio feedback corpus. The variation and richness of language used in the audio feedback corpus may be suggested when considering the quantity of Rank 6 token types, which all represent no more than 1.5% of total sub-corpus (see Appendix H). This diversity of language is further supported when measuring the token/type ratio, which reports a high variation of 53% for positive attitudinal appraisals made in the audio feedback corpus.

Rank	Word	Frequency	% of Code
1	Good	7	10.6%
2	Well Done	6	9.1%
2	Well	6	9.1%
2	Clear	6	9.1%
3	Interesting	5	7.5%
4	Like	3	4.5%
4	Relevant	3	4.5%
5	Highlight	2	3.0%
5	High Standard	2	3.0%
6	Clearly	1	1.5%

Table 5.4 Top Ten Positive Attitudes expressed in Audio Feedback

Comparatively, Table 5.5 presents the top ten unique word formulations constituting the sub-corpus of positive appraisals made in written feedback (see Appendix I for the full report). As with the audio feedback corpus, the most highly ranked and most frequently occurring positive attitudinal appraisal expressed in the written feedback corpus is the adjective 'good' with a frequency of 14, which represents 20% of this sub-corpus. Interestingly, the rank 2 token type 'well done' is also the same across corpora, yet occurs more frequently in written feedback corpus, representing 15.7% of all positive attitudes expressed in written feedback. It is also clear that the most frequent tokens constitute a large

percentage of the codes presented within this system. The top 2 ranked token types constitute 35.7% of all the coded positive attitudinal appraisal expressed in the written feedback corpus. This reduced variation of language is further suggested when measuring the token/type ratio, which reports a lower variation than that of the audio feedback corpus, of 27% for positive attitudinal appraisals made in the written feedback corpus.

Rank	Word	Frequency	% of Code
1	Good	14	20.0%
2	Well Done	11	15.7%
3	Accurate	9	12.8%
4	Substantial	5	7.1%
4	Well	5	7.1%
4	Fair	5	7.1%
5	Informed	4	5.7%
6	Clear	3	4.2%
7	Nice	2	2.8%
7	Excellent	2	2.8%

Table 5.5 Top Ten Positive Attitudes expressed in Written Feedback

Table 5.6 presents the top ten unique word formulations constituting the sub-corpus of negative appraisals made in audio feedback (see Appendix J for the full report). The most highly ranked and most frequently occurring negative attitudinal appraisals expressed in the audio feedback corpus have a frequency of 4, which each only represent 7.1% of this sub-corpus. Interestingly, some of the lower frequency token types may be considered to apply a colloquial register (e.g. *okay, bitty, ramble, odd*), which each represent 1.7% of all the coded negative attitudinal appraisal expressed in the audio feedback (see Appendix J). Interestingly, the use of colloquial language has been argued by Austin (2016) to soften the negative emotional impact feedback comments have on students. The variation and richness of language used in the audio feedback corpus may be suggested when considering the number of Rank 4 token types, which each represent only 1.7% of the total sub-corpus (see Appendix J). This diversity of language is further supported when measuring the token/type ratio, which reports a high variation of 53% for negative attitudinal appraisals made in the audio feedback corpus.

Rank	Word	Frequency	% of Code
1	Confused	4	7.1%
1	Unsure	4	7.1%
1	(Un)acceptable	4	7.1%

1	Questionable	4	7.1%
2	Brief	3	5.3%
2	(Un)detailed	3	5.3%
2	(Ir)relevant	3	5.3%
2	(Un)clear	3	5.3%
3	Cumbersome	2	3.5%
3	Difficult	2	3.5%

Table 5.6 Top Ten Negative Attitudes expressed in Audio Feedback

In comparison, Table 5.7 presents the top ten unique word formulations constituting the sub-corpus of negative appraisals made in written feedback (see Appendix K for the full report). The most highly ranked and most frequently occurring negative attitudinal appraisal expressed in the written feedback corpus is the adjective 'limited' with a frequency of 9, which represents 16.9% of this sub-corpus. It is also apparent that the most frequent tokens form one quarter of the total codes presented within this system. The top 2 ranked token types constitute 25.9% of all the coded positive attitudinal appraisal expressed in the written feedback corpus. This reduced variation of language is further suggested when measuring the token/type ratio, which reports a lower variation than that of the audio feedback corpus, of 45% for negative attitudinal appraisals made in the written feedback corpus.

Rank	Word	Frequency	% of Code
1	Limited	9	16.9%
2	Errors	5	9.4%
3	Incomplete	4	7.5%
3	Lacks	4	7.5%
4	Little	3	5.6%
4	(Un)Clear	3	5.6%
4	Confusion	3	5.6%
5	Disappointing	2	3.7%
5	(In)correct	2	3.7%
5	Poor	2	3.7%

Table 5.7 Top Ten Negative Attitudes expressed in Written Feedback

5.4.2 Comparing Engagement Assertions in Audio and Written Feedback

A numerical summary of assertions made by tutors when providing written as opposed to audio feedback with respect to ENGAGEMENT is provided in Table 5.8. In the horizontal quadrant of Table 7, assertion rates are broken down into the individual subsystems of this category: MONOGLOSSIC, HETROGLOSSIC CONTRACTIVE, and HETROGLOSSIC

EXPANSIVE ASSERTIONS. In each case, data resulting from each subsystem's various categories is presented alongside the overall combined results for each subsystem. Similar to appraisals made under ATTITUDE, raw numerical counts of the number of assertions made in each corpus are given in the first vertical data column. In the second vertical column for each feedback corpus, the rate of assertions per 100 words for each subsystem and subcategories are reported to allow relative comparison.

	Audio Feedback		Written Feedback	
	Frequency Count	**Rate Per 100 Words**	**Frequency Count**	**Rate Per 100 Words**
Monoglossic Assertions				
Bare assertions	15	0.37	49	1.70
Total Monoglossic Assertions	**15**	**0.37**	**49**	**1.70**
Hetroglossic Contractive Assertions				
Proclaim: Endorsement	3	0.07	7	0.24
Proclaim: Concur	15	0.37	8	0.27
Proclaim: Pronounce	136	3.35	84	2.92
Disclaim: Denial	18	0.44	10	0.34
Disclaim: Counter	47	1.16	25	0.86
Total Hetroglossic Contractive Assertions	**219**	**5.43**	**134**	**4.65**
Hetroglossic Expansive Assertions				
Entertain	74	1.82	30	1.04
Attribute Acknowledge	1	0.02	0	0.00
Total Hetroglossic Expansive Assertions	**75**	**1.84**	**30**	**1.04**

Table 5.8 Occurrence Summary of Engagement Appraisal

The significance of any potential differences in engagement appraisal occurring between the two feedback corpora was assessed using the log-likelihood test (Cressie & Read, 1984). Log-likelihood tests were conducted using data for the overall total appraisals made within each subsystem: MONOGLOSSIC, HETROGLOSSIC CONTRACTIVE, and HETROGLOSSIC EXPANSIVE ASSERTIONS. All frequencies were high enough to allow reliable statistical analysis.

Based on these results, distinct differences in relative rates of assertions become clear when considering monoglossic assertions made in both corpora. Tutor feedback provided using the audio modality made 0.37 monoglossic assertions per 100 words, in comparison to 1.70 per 100 words made in the written feedback. This represents a statistically significant difference in rates of monoglossic assertions made within the two corpora, in that written feedback made more monoglossic assertions to students than did audio feedback (λ = 32.52,

P<.0001). Tutor feedback provided using the audio modality made 5.43 hetroglossic contractive assertions per 100 words, in comparison to only 4.65 per 100 words made in the written feedback corpus. However, the differences in the rates of hetroglossic contractive assertions between the two corpora did not reach significance ($\lambda = 1.87$, P> 0.05). Marked differences are seen again in rates of hetroglossic expansive assertions, whereby tutor feedback provided using the audio modality made 1.84 hetroglossic expansive assertions per 100 words, in comparison to only 1.04 per 100 words made in the written feedback. This signifies a statistically significant difference in rates of hetroglossic expansive assertions made within the two corpora, in that audio feedback made more hetroglossic expansive assertions to students than did written feedback ($\lambda = 7.59$, P<.01). To provide relevant contextualisation of these findings, the heavy use of "imperatives … with little mitigation or qualification" (Mutch, 2003, p.31) within the 'bare' or monologic assertions used in written feedback, serves the negative interpersonal function of reinforcing the authoritative position of the tutor in the academic discipline. In comparison, more mitigated forms of modality, like the hetroglossic expansive assertions found in the audio feedback corpus, create a different relationship between the tutor and the student, one which is less dependent on the tutors perceived expert power and allows the tutor to adopt a "less threatening voice" within the feedback they provide (Hyland & Hyland, 2001, p. 198).

As with systems analysed under ATTITUDE, the differences between the two feedback modalities was also analysed by considering the variation and richness of vocabulary used in the corpora. Frequency profiles and token/type ratios were conducted using combined total data from the various subsystems constituting MONOGLOSSIC, HETROGLOSSIC CONTRACTIVE, and HETROGLOSSIC EXPANSIVE ASSERTIONS. Frequency profiling is used to visually present the variation in token types (unique word formulations) coded within the corpora for these three categories of ENGAGEMENT.

Table 5.9 presents the unique word formulations constituting the sub-corpus of monoglossic assertions made in audio feedback. The most highly ranked and most frequently occurring monoglossic assertion expressed in the audio feedback is '*This essay'* (e.g. *This essay contained*…) has a frequency of 9. It is also clear that the most frequent token constituted a large percentage of the codes presented within this system, representing 60% of all monoglossic assertions made within the audio feedback corpus. Interestingly, all monoglossic assertions made in this corpus can be broadly classified as declarative statements made on behalf of the tutor concerning the content of the students work (e.g. *This essay contained a discussion of* ...). This lack of variation in the vocabulary used to express

monoglossic assertions by the tutor in the audio feedback corpus is also suggested by the token/type ratio for this category, which presents a relatively low percentage of 20%.

Rank	Word	Frequency	% of Code
1	This Essay	9	60%
2	This Assignment	4	26.6%
3	This Paper	2	13.3%

Table 5.9 Monoglossic assertions made in Audio Feedback

Table 5.10 presents the top ten unique word formulations constituting the sub-corpus of monoglossic assertions made in written feedback (see Appendix L for the full report). The most highly ranked and most frequently occurring monoglossic assertion expressed in the written feedback is '*Work contains*' (e.g. *Work contains a discussion*…) has a frequency of 12, which represents 24.4% of the whole corpus. It is also clear that the most frequent tokens constituted a large percentage of the codes presented within this system. The top 2 ranked token types constitute 44.8% of all the coded monoglossic assertions made in the written feedback corpus. As with the audio feedback corpus, some monoglossic assertions made in this corpus can be broadly classified as declarative statements made on behalf of the tutor concerning the content of the students work (e.g. *Work contains a discussion of* ...). However, bare imperative assertions are also made by the tutor in written feedback (e.g. *Avoid emotive language*...). The token/type ratio of 26% for monoglossic assertions made in the written feedback corpus reports a slightly higher variation in language use to that reported for the audio feedback corpus.

Rank	Word	Frequency	% of Code
1	Work Contains	12	24.4%
2	Work Exhibits	10	20.4%
3	Use	4	8.1%
3	It allows	4	8.1%
3	Ensure	4	8.1%
4	Avoid	3	6.1%
4	This essay	3	6.1%
4	Your Essay	3	6.1%
5	Work Displays	2	4.1%
6	Work Reads	1	2.1%

Table 5.10 Top Ten Monoglossic assertions made in Written Feedback

Table 5.11 presents the top ten unique word formulations constituting the sub-corpus of hetroglossic contractive assertions made in audio feedback (see Appendix M for the full report). The most highly ranked hetroglossic contractive assertion expressed in the audio feedback corpus is emplaced implicitly via a sub-clausal adverb '*really*' with a high frequency of 36, which is 16.4% of codes in this sub-corpus corpus. Notably, implicit realizations of assertions (e.g. *Really, Is and Was*) represented 32.4% of all hetroglossic contractive codes in the audio feedback corpus. It is also clear that the most frequent tokens constitute one quarter of the codes presented within this system. The top 2 ranked token types constitute 27.4% of all the coded hetroglossic contractive assertions made in the audio feedback corpus. Interestingly, some of those higher-ranking token types commonly occur as concur-counter concessions or pairings, whereby positive argumentative ground is given initially (e.g. *You have* [Proclaim: Concur] *a nice clear writing style…*), only for that ground to be retaken in the subsequent counter move (e.g. *But* [Proclaim: Counter] *I would urge you to try to break down some of your paragraphs*). Such counter-concur concessions may act to inadvertently hedge criticism and soften negative the emotional impact of the feedback on the student (Martin & White, 2005). Despite the heavy use of some token types in this subsystem, the richness of language used in the audio feedback corpus may be suggested when considering the number of rank 12 and 13 token types, which all represent no more than 0.9% of the sub-corpus (see Appendix M). Notably, some of these token types employ other-related (e.g. *You did…*) or self-related (e.g. *I wanted…*) verb/attribute projections, which may be argued to acknowledge the student as 'being' and potentially reduce the social distance arising between the student and the tutor (Biber, 1988; Helmbrecht, 2002). This is as the student/tutor is being directly referenced within the feedback, rather than providing a 'bare' discussion of the students' essay (Mutch, 2003). Despite such interesting findings, the token type ratio of 16% reports a relatively low variation of language found in hetroglossic contractive comments made in the audio feedback corpus.

Rank	Word	Frequency	% of Code
1	Really	36	16.4%
2	Is	24	10.9%
3	Need(s/ed)	22	10.4%
4	But	19	8.6%
5	However	18	8.2%
6	Would	12	5.4%
7	Was	11	5.0%

8	You Have	7	3.1%
9	Will	6	2.7%
9	Only	6	2.7%

Table 5.11 Top Ten Hetroglossic Contractive assertions made in Audio Feedback

Table 5.12 presents the top ten unique word formulations constituting the sub-corpus of hetroglossic contractive assertions made in written feedback (see Appendix N for the full report). The most highly ranked hetroglossic contractive assertion expressed in the audio feedback corpus is emplaced explicitly via a top-level clausal and semi-modal verb '*need*' with a frequency of 19, which represents 14.1% of the sub-corpus. Following this, tutor assertions made in this corpus showed a reduced rate of implicit assertions (e.g. *Was*) to that in the audio feedback corpus, representing only 15.5% of all hetroglossic contractive codes. It is also clear that the most frequent tokens were commonly explicit modal assertions of a strong epistemic qualification (e.g. *Need, Should, Must, Would, Will, Have got*) to convey conviction on behalf of the tutor. Interestingly, token types with strong epistemic modality represented 42.3% of all hetroglossic contractive codes in the written feedback corpus, in comparison to only 20.2% of that in the audio feedback corpus. Such an active use of modal assertions serves the interpersonal function of further reinforcing the students' perceived authority of the tutor in the discipline (Austin, 2016). Similarly, there is a lesser variation in token types which employ other-related (e.g. *You have…*) and self-related (e.g. *I highly…*) verb/attribute projections in the written feedback corpus. This reduced variation of language is further suggested when measuring the token/type ratio, which reports a lower variation than that of the audio feedback corpus, of 10% for hetroglossic contractive assertions made in the written feedback corpus.

Rank	Word	Frequency	% of Code
1	Need(s/ed)	19	14.1%
2	Is	17	12.6%
3	Should	11	8.2%
4	Although	10	7.4%
4	But	10	7.4%
4	Not	10	7.4%
5	Must	8	5.9%
6	Would	7	5.2%
6	Will	7	5.2%
7	You Have	5	3.7%

Table 5.12 Top Ten Hetroglossic Contractive assertions made in Written Feedback

Table 5.13 presents the top ten unique word formulations constituting the sub-corpus of hetroglossic expansive assertions made in audio feedback (see Appendix O for the full report). The most highly ranked hetroglossic expansive assertion expressed in the audio feedback corpus is the modal verb '*could*' with a frequency of 12, which represents 16% of the sub-corpus. From this, it is clear that some of the most frequent tokens were expressed as various forms of modal verbs or modal adjuncts of a weak (e.g. *Could, Maybe, Might, May, Seems*) or moderate (e.g. *Probably*) epistemic qualification to convey possibility on behalf of the tutor and inadvertently enable the tutor to maintain a positive interpersonal relationship with the student. Interestingly, variation continues to be seen when considering modality is also articulated via diverse forms of subjective self-related verb/attribute projections (e.g. *I think, In my opinion, I suggest*), which account for 37% of the hetroglossic expansive codes in this sub-corpus. Akin to those tokens coded as hetroglossic contractive, the diverse use of self-related verb/attribute projections emplaces the tutor directly into the feedback (Biber, 1988) and may reduce a student's perceptions concerning the social distance of their tutor (Mutch, 2003). Notably, word formulations constituting expository questions (e.g. *how do evolutionary psychologists conduct their research in comparison to social psychologists?)* are ranked third with a frequency of 10 in this corpus, whereas they do not occur in the written feedback corpus (see Table 5.14). These expository questions posed by the tutor, use interrogatives to help form the interactional status of the feedback (Martin & White, 2005). This variation and richness of language is further suggested when measuring the token/type ratio, which reports a variation of 29% for hetroglossic expansive assertions made in the audio feedback corpus.

Rank	Word	Frequency	% of Code
1	Could	12	16.0%
2	I Think	11	14.6%
3	Expository Questions	10	13.3%
4	Seems	7	9.3%
5	If	7	9.3%
6	Maybe	5	6.6%
7	I Suggest	3	4.0%
7	I Like	3	4.0%
7	I Would Say	3	4.0%
7	Might	3	4.0%

Table 5.13 Top Ten Hetroglossic Expansive assertions made in Audio Feedback

Table 5.14 presents the unique word formulations constituting hetroglossic expansive assertions made in written feedback. Similarly to audio feedback, the most highly ranked hetroglossic expansive assertion expressed in the written feedback corpus is the modal verb '*could*' with a frequency of 15, which represents 50% of the sub-corpus. From this, it is clear that while both corpora share this modal verb as being the most frequent hetroglossic expansive assertion, the written feedback corpus does not express such weak epistemic qualification through alternative modal verbs as seen in audio feedback (i.e. *Maybe*, *Might, May*). Interestingly, while arising to a lesser degree than the audio feedback corpus, modality is articulated via some forms of subjective self-related verb/attribute projections (e.g. *I think, I felt, I recommend*), which account for 50% of the unique word formulations residing in this sub-category and 13.2% of the hetroglossic expansive codes in the written feedback corpus. The token type ratio for hetroglossic expansive assertions made in the written feedback corpus reports a variation of 20%, which suggests a reduced variation in language than that found within the audio feedback corpus.

Rank	Word	Frequency	% of Code
1	Could	15	50%
2	If	10	25%
3	I Think	2	6.6%
4	I Felt	1	3.3%
4	I Recommend	1	3.3%
4	Should you like	1	3.3%

Table 5.14 Hetroglossic Expansive assertions made in Written Feedback

5.4.3 Comparing Graduation of Appraisals in Audio and Written Feedback

A numerical summary of appraisal made by tutors when providing written as opposed to audio feedback with respect to GRADUATION is provided in Table 5.15. In the horizontal quadrant of Table 5.15, appraisal rates are broken down into the individual subsystems of this category: FORCE INTENSIFICATION, FORCE QUANTIFICATION, and FOCUS APPRAISAL. In each case, data resulting from each subsystem's various categories is presented alongside the overall combined results for each subsystem, which is subsequently divided into both raised and lowered poles. As with appraisals made under ENGAGEMENT and ATTITUDE, raw numerical counts of the number of appraisals made in each corpus are given in the first vertical data column. In the second vertical column for each feedback

	Audio Feedback		Written Feedback	
	Frequency Count	**Rate Per 100 Words**	**Frequency Count**	**Rate Per 100 Words**
Force: Intensification Appraisal				
Quality				
Raised appraisal	43	1.06	37	1.28
Lowered appraisal	24	0.59	9	0.31
Process				
Raised appraisal	1	0.02	5	0.17
Lowered appraisal	20	0.49	1	0.03
Modality				
Raised appraisal	64	1.58	60	2.08
Lowered appraisal	32	0.79	15	0.52
Total Force: Intensification Appraisal	**184**	**4.56**	**127**	**4.42**
Raised appraisal	**108**	**2.66**	**102**	**3.55**
Lowered appraisal	**76**	**1.87**	**25**	**0.86**
Force: Quantification Appraisal				
Number				
Raised appraisal	7	0.17	5	0.17
Lowered appraisal	41	1.01	16	0.55
Presence				
Raised appraisal	7	0.17	25	0.87
Lowered appraisal	9	0.22	2	0.06
Extent				
Raised appraisal	3	0.07	0	0.00
Lowered appraisal	10	0.24	3	0.10
Total Force: Quantification Appraisal	**77**	**1.90**	**51**	**1.77**
Raised appraisal	**17**	**0.41**	**30**	**1.04**
Lowered appraisal	**60**	**1.48**	**21**	**0.73**
Focus Appraisal				
Sharpened appraisal	38	0.93	0	0.00
Softened appraisal	16	0.39	0	0.00
Total Focus Appraisal	**54**	**1.33**	**0**	**0.00**
Sharpened appraisal	**38**	**0.93**	**0**	**0.00**
Softened appraisal	**16**	**0.39**	**0**	**0.00**

Table 5.15 Occurrence summary of Graduation Appraisal

corpus, the rate of appraisals per 100 words for each subsystem and subcategories are reported to allow relative comparison.

As with other appraisal systems, the significance of any potential differences in graduation appraisal occurring between the two feedback corpora were assessed using the log-likelihood test (Cressie & Read, 1984). Log-likelihood tests were conducted using data for the overall total appraisals made within each subsystem: FORCE INTENSIFICATION, FORCE QUANTIFICATION, and FOCUS APPRAISAL. As some raw frequencies were too low to allow reliable statistical analysis only the following types of graduation appraisal were analysed statistically: (a) raised intensification appraisal (b) lowered intensification appraisal (c) raised quantification appraisal and (d) lowered quantification appraisal.

Based on these results, marked differences in relative rates of appraisal become clear when considering raised and lowered graduation appraisals separately. Tutor feedback provided using the audio modality made 1.87 lowered intensification appraisals per 100 words, in comparison to only 0.86 per 100 words made in the written feedback. This represents a statistically significant difference in rates of appraisals made within the two corpora, in that audio feedback made more lowered intensification appraisals to students than did written feedback (λ = 12.47, P<.001). Similarly, tutor feedback provided using the audio modality made 1.48 lowered quantification appraisals per 100 words, in comparison to only 0.73 per 100 words made in the written feedback. This signifies a statistically significant difference in rates of appraisals made within the two corpora, in that audio feedback made more lowered quantification appraisals to students than did written feedback (λ = 8.60, P<.01).

However, marked differences are seen again in rates of raised assertions made within both corpora. Tutor feedback provided using the written modality made 3.55 raised intensification appraisals per 100 words, in comparison to only 2.66 per 100 words made in the audio feedback. This is a statistically significant difference, in that written feedback produced more raised Intensification appraisals than did audio feedback (λ = 4.23, P<.05). Correspondingly, tutor feedback provided using the written modality made 1.04 raised quantification appraisals per 100 words, in comparison to only 0.41 per 100 words made in the audio feedback. This represents a statistically significant difference in rates of appraisals made within the two corpora, as written feedback made more raised quantification appraisals to students than did audio feedback (λ = 9.46, P<.01).

As with systems analysed under ATTITUDE and ENGAGEMENT, the differences between the two feedback modalities was also analysed by considering the variation and richness of vocabulary used in the corpora. Frequency profiles and token/type ratios were

conducted using combined total data from the various subsystems constituting FORCE and FOCUS. Frequency profiling is used to visually present the variation in token types (unique word formulations) coded within the corpora for these two categories of GRADUATION and divided into the central streams of upscaling and downscaling of appraisals made by both tutors.

Table 5.16 presents the top ten unique word formulations used to downscale appraisals made in audio feedback (see Appendix P for the full report). The most highly ranked downscaler used in the audio feedback corpus is the non-figurative quantitative determiner '*some*' used to grade attitudinal meanings with a frequency of 25. This most frequent token constitutes a moderate proportion of the codes presented within this system, representing 16.5% of all downscaled appraisals made within the audio feedback corpus. An additional facet noted in the data was the varying use of downscaling as hedging with critical feedback comments (e.g. *WE need to be A BIT MORE* $^{Force:\ Quantification\ -\ \downarrow\ presence}$ *organised and A BIT MORE* $^{Force:\ Quantification\ -\ \downarrow\ presence}$ *assertive in our writing*) so to lessen the negative impact of the feedback on the student, and also the use of downscaling to reduce the impression of intensity and workload of tasks that need to be undertook by the student to improve (e.g. *It MIGHT* $^{[Force:\ Intensification\ -\ \downarrow\ Modality]}$ *also be useful if you look at SOME* $^{Force:\ Quantification\ -\ \downarrow Number}$ *websites*). Interestingly, in the first example outlined above, the tutor outlines the task as a collaborative endeavour through the use the personal pronoun '*We*'; a feature which commonly arises within the audio feedback corpus. While not an explicit downscaler that corresponds with the analytic framework developed by Martin and White (2005), the use of this personal pronoun may also serve the function of lessening the impression of the workload upon the student by framing the improvement as a callaborative endeavour (Helmbrecht, 2002; Scheibman, 2004). The variation and richness of language used in the audio feedback corpus may be suggested when considering the quantity of Rank 11 token types, which all represent only 0.6% of the total downscales used in this sub-corpus (see Appendix P). This diversity of language is further measured using the token/type ratio, which reports a variation of 24% for downscaled appraisals made in the audio feedback corpus.

Rank	Word	Frequency	% of Code
1	Some	25	16.4%
2	Quite	20	13.1%
3	Could	13	8.5%
3	Think	13	8.5%
4	Really	12	7.8%
5	In Places	7	4.6%
5	A Bit More	7	4.6%
6	Some Places	6	3.9%
7	Few	5	3.2%
7	Maybe	5	3.2%

Table 5.16 Top Ten Downscaled Appraisals made in Audio Feedback

Comparatively, Table 5.17 presents the unique word formulations constituting the sub-corpus of downscaled appraisals made in written feedback. The most highly ranked and most frequently occurring downscaled appraisal expressed in the written feedback corpus is the modal verb 'could' used to grade engagement values with a frequency of 15, which is 36.2% of the sub-corpus. As with audio feedback, an additional feature noted in the data was the use of downscaling as hedging with critical feedback comments (e.g. *Your writing is A BIT* $^{[Force:\ Intensification\ -\ \downarrow\ Quality]}$ *too descriptive)* to lessen the impact of the feedback on the student, and also the use of downscaling to reduce the impression of intensity and workload of tasks that need to be undertook by the student to improve (e.g. *I WOULD* $^{[Force:\ Intensification\ -\ \uparrow\ Modality]}$ *urge you to try and break down SOME* $^{Force:\ Quantification\ -\ \downarrow Number}$ *of your paragraphs A BIT MORE* $^{Force:\ Quantification\ -\ \downarrow\ Presence]}$*)*. However, both of these features noted in the written feedback corpus appear to be less varied in their use and are often precursed by upscalers (e.g. I *WOULD* $^{[Force:\ Intensification\ -\ \uparrow\ Modality]}$ *urge)* so to convey further conviction and authority on behalf of the tutor (Austin, 2016). It is also clear that the most frequent tokens constitute a large percentage of the codes presented within this system. The top 2 ranked token types constitute 58.6% of all the coded downscaled appraisals made in the written feedback corpus. This reduced variation of language is further suggested when measuring the token/type ratio, which reports a slightly lower variation than that of the audio feedback corpus, of 21% for downscaled appraisals made in the written feedback corpus.

Rank	Word	Frequency	% of Code
1	Could	15	32.6%
2	Some	12	26.0%
3	Fair	5	10.8%
3	Reasonable Amount	5	10.8%
4	A Bit	2	4.3%
4	Quite	2	4.3%
4	In Places	2	4.3%
5	Nearly	1	2.2%
5	Felt	1	2.2%
5	Slightly	1	2.2%

Table 5.17 Downscaling of Appraisals made in Written Feedback

Table 5.18 presents the top ten unique word formulations constituting the sub-corpus of upscaled appraisals made in audio feedback (see Appendix Q for the full report). The most highly ranked and most frequently occurring upscaled appraisal used in the audio feedback corpus is the intensified lexis and adverb 'really' with a frequency of 36, representing 22% of all upscaled appraisals made within the corpus. Interestingly, this most frequent token is not present in the written feedback corpus as it is more common in spoken language (Biber, 2009). Similarly to the use of downscaling, an additional facet noted in the data was the varying application of upscaling as not only a method of intensifying praise given to a student by using adverbs (e.g. *You REALLY [Focus↑] synthesized the information into one paragraph and the organization of the paper was VERY VERY [Force: Intensification - ↑Quality] clear*), but also to apply emphasis on modal or semi-modal verbs to place stress on suggestive comments, which provide students with methods of improving their future work (e.g. *You REALLY NEED [Force: Intensification - ↑ Modality] to have a Harvard guide book*). However, such emphasis appeared to be used to a lesser extent on critical feedback comments aimed either at the student themselves or their assignment, which may help maintain a positive interpersonal relationship between the student and the tutor (Austin, 2016). The variation of language used in the audio feedback corpus may be further suggested when considering the quantity of Rank 10 token types, which all represent only 0.6% of the total downscales used in this corpus (see Appendix Q). This diversity of language is further measured using the token/type ratio, which reports a variation of 22% for upscaled appraisals made in the audio feedback corpus.

Rank	Word	Frequency	% of Code
1	Really	36	22.0%
2	Need	26	15.9%
3	Would	22	13.4%
4	Very	19	11.6%
5	Trigram	6	3.6%
6	Definitely	5	3.0%
6	Will	5	3.0%
7	In Fact	4	2.4%
7	Real	4	2.4%
8	Have To	3	1.8%

Table 5.18 Top Ten Upscaled Appraisals made in Audio Feedback

In comparison, Table 5.19 presents the top ten unique word formulations constituting the sub-corpus of upscaled appraisals made in written feedback (see Appendix R for the full report). The most highly ranked and most frequently occurring upscaled appraisal used in the written feedback corpus is the adverb and determiner 'more' with a frequency of 21, which represents 15.9% of the sub-corpus. As with audio feedback, an additional feature noted in the data was the varying use of upscaling as a method of intensifying praise given to a student by using adverbs (e.g. *A VERY* [Force: Intensification - ↑ Quality] *good piece of work),* but also to apply emphasis using modal verbs to place stress on suggestive comments, which provide students with methods of improving their future work (e.g. *You MUST* [Force: Intensification - ↑ Modality] *provide a page number where you quote directly from a source).* However, when compared to the audio feedback corpus, upscaling seemed to be used somewhat more so when providing critical feedback comments (e.g. *There was VERY* [Force: Quantification – ↑ Presence] *little referencing with NUMEROUS* [Force: Quantification – ↑ Number] *errors AND* [Force: Quantification – ↑ Presence] *omissions*), which may serve the interpersonal function of reinforcing the tutor's authority in the discursive relationship and threaten 'face' of the student (Austin, 2016). Despite this variation in application and use of upscaling in the written feedback corpus, a reduced richness in expression maybe suggested when considering the low quantity of rank 12 token types. This reduced variation of language is further suggested when measuring the token/type ratio, which reports a slightly lower variation than that of the audio feedback corpus, of 16% for upscaled appraisals made in the written feedback corpus.

Rank	Word	Frequency	% of Code
1	More	21	15.9%
2	Need	19	14.3%
3	Should	12	9.0%
3	Good	12	9.0%
4	Trigrams	11	8.3%
5	Very	9	6.8%
6	Must	8	6.6%
7	Will	7	5.3%
8	Would	6	4.5%
9	Essential	4	3.0%

Table 5.19 Top Ten Upscaled Appraisals made in Written Feedback

5.4.4 Summary of Key Findings

The results presented in this section indicate differences and similarities in both the occurrence and variation of evaluative language resources employed by tutors when providing audio and written feedback. Teachers providing both types of feedback were similar in the rate of employing linguistic resources to convey positive/negative appreciative appraisal and hetroglossic contractive assertions. However, teachers providing written feedback made more frequent positive/negative judgement appraisals, monoglossic bare assertions, and raised intensification/quantification appraisals, whereas teachers providing audio feedback made more frequent hetroglossic expansive assertions, and lowered intensification/quantification appraisals. With regards to the comparisons based on the *variation* of evaluative language resources, the teacher providing audio feedback employed a larger variation of language when making positive/negative attitudinal appraisals, hetroglossic contractive/expansive assertions, and up-scaled/downscaled appraisals, whereas the teacher providing written feedback only employed a larger variation of language when making monoglossic assertions. These results are discussed below in relation to the social-affective dimension of the framework and the sub-research question presented earlier in this chapter.

5.5 Discussion

This research has provided a multi-layered quantitative analysis on tutors' use of evaluative language resources when providing audio compared to written feedback. How tutors phrase feedback using evaluative language resources primarily holds importance within the social-

affective dimension of Yang and Carless' (2013) three-factor framework for dialogic feedback. This is as the lexico-grammatical resources employed by tutors can mediate the way in which feedback is communicated inter-subjectively and affects students' emotional engagement with their comments (Hu & Choo, 2015). If categorized under this central framework, previous feedback literature may infer that the evaluative language resources employed by tutors in their *written* comments are highly *monologic* in nature, as they commonly trigger negative emotions around the feedback process (Mutch, 2003) and create increasing feelings of an unequal discursive relationship (Austin, 2016). As such, this comparative analysis aimed to utilize linguistic literature pertaining to the speech-writing dichotomy (Biber, 1988; Halliday, 1985), which infers the rich interactional potential of face-to-face *spoken* utterances, to assess the potential differences in the use of evaluative language that may arise when employing technologically mediated forms of communication (Baron, 1998b). Therefore, this discussion affords attention to understanding how far providing feedback using the audio recording software, may impact tutors use of evaluative language in feedback situations and consequently, address the issues noted in the previous literature by reinstating the social-affective features of dialogic feedback (Yang & Carless, 2013). As such, the results of this phase of the study are sequentially discussed in relation to the three categories of evaluative language noted by Martin & White (2005).

Evaluative Language	Audio Feedback	Written Feedback
Attitude	• More active use of language aimed at *appreciation* of the student's *work*, providing low social evaluation. • More active use of language that was *informal* or *colloquial* in nature, which can promote the interpersonal relationship by softening negative impact on the student.	• More active use of language aimed at *judgement* of the student *themselv*es, providing higher social evaluation. • More active use of language that was *formal* in nature, which can prevent the development of interpersonal relationships.
Graduation	• More active use of *hedging*, as mitigation to soften negative emotional impact of feedback on the student and maintain positive interpersonal relationship.	• More active use of *imperatives*, which highlight tutors' authority in the discursive relationship and threaten face of the student.

Engagement	• More active use of *plural* and *personal pronouns* (e.g. I, You, We), which acknowledges the student/tutor and/or reinforces the collaborative nature of the feedback. • More active use of *counter-concur concessions*, which act to hedge criticism and maintain positive interpersonal relationship. • Use of *expository questions*, which use interrogatives to acknowledge the student as 'being' and help form interactional status of the feedback.	• More active use of the *passive construction*, formulated through 'bare' or *monoglossic* assertions, which reinforces power of the staff member and increases social distance. • More active use of *modal assertions* of a strong epistemic qualification, which reinforces perceived authority of the staff member.

Table 5.20 A comparative summary of the linguistic features present in each feedback modality

According to Martin and White (2005) 'attitude' is concerned with the linguistic resources individuals use to express "emotional reactions, judgements of behaviour, and evaluation of things" (p.35). The observed differences in attitudinal evaluative language found in this phase of the study, are consistent with the distinctions between spoken and written language varieties established by previous research focusing upon the speech-writing dichotomy (e.g. Biber, 1988) and could be explained in terms of the mediating role the technology serves for the tutor when producing feedback. As explained by Biber (1988), face-to-face forms of spoken communication usually provides low social evaluation, which then serves the communicative function of maintaining and building the interpersonal relationship between speakers. Presented visually in Table 5.20, the results suggest that while both written and audio feedback made 'appreciative' evaluation of the students' assignment, feedback analysed arising from the written modality made more active use of 'judgement' evaluations aimed at assessing the student in and of themselves. Interestingly, Austin (2016) also notes the active use of 'judgement' appraisals provided by tutors when utilising written feedback and suggests that employing this type of evaluative language may serve the interpersonal function of reinforcing the unequal discursive relationship between the staff member (author) and student (reader). Similarly, such results correspond with the early recommendations for dialogic feedback proposed by Nicol (2010), who states for feedback to be effective it must be 'non-judgemental', containing descriptive evaluation of the assessment rather than of the student's behaviour to lessen the impact on a student's self-esteem and perceived level of social sanction issued by the academic.

Language resources used for social dialogistic positioning (Bakhtin, 1981) are encapsulated by Martin and White (2005) as 'engagement' and "provide the means for the authorial voice to position itself with respect to, and hence to engage with, the other voices and alternative positions construed as being in play in the current communicative context" (p.94). Akin to the differences reported under attitudinal appraisal, the differences in the use of engagement assertions arising within the two feedback modalities resonate with the reported distinctions between spoken and written language varieties (e.g. Biber, 1988), and further suggest the mediating communicative function of technology in feedback provision. As explained by Biber (1988), face-to-face forms of spoken communication usually are highly dialogic in nature, including linguistic features, such as personal/plural pronouns and interrogatives, which then serve the function of engaging with the other speaker's value positions and help form interactional status of the communication. Presented in Table 5.20, the results of this study suggest that the tutor providing written comments made more active use of 'bare' or 'monologic' assertions, while the tutor providing audio comments made more active use of hetroglossic expansive assertions. As noted by Mutch (2003), written feedback includes heavy reliance on bare assertions, which include "imperatives … with little mitigation or qualification" (p.31) and only serve the interpersonal function of reinforcing the authoritative position of the staff member in the discipline. By contrast, more mitigated forms of modality, like those found in the audio feedback corpus (see Table 5.20), are suggested to form a different relationship between the tutor and the student, one that is less dependent upon the tutors perceived expert power (Mutch, 2003). Discussed further by Hyland & Hyland (2001), the effect of this mitigated framing allows the tutor "to relinquish some of their authority and adopt a less threatening voice" (p.198) so to promote emotional sensitivity and help form the interactional status of assessment feedback.

Finally, Martin and White (2005) discuss 'graduation' which is similarly concerned with interpersonal positioning by focusing upon the "degree of the speaker/writer's intensity, or the degree of their investment in an utterance" (Stewart, 2005, p. 135). As with the results discussed above, the differences in the use of graduation occurring within the two feedback modalities correspond with distinctions between spoken and written language varieties (e.g. Biber, 1988) and again suggest the potential of technology to mediate the communicative function of feedback provision. As explained by Brazil (1995), face-to-face forms of spoken communication usually involve downscaling in the form of hedging, which then allows the speaker to pursue communicative goals with respect to a second party. In reference again to Table 5.20, the results suggest that feedback analysed using the written modality contained

more amplifying language (e.g. imperatives) to upscale an attitude or assertion made by the tutor, whereas feedback analysed using the audio modality contained more language aimed at downscaling (e.g. hedging) an attitude or assertion made by the tutor. Relatedly, Austin (2016) also notes the active use of upscaled appraisals provided by tutors when utilising written feedback and suggests that employing this type of evaluative language may confirm the tutors 'right to criticise' and reaffirm their position as the expert. Opposingly, the use of downscaling may hold a different communicative function, promoting the interpersonal relationship, by softening the emotional impact on the student. As noted by Yang and Carless (2013) this may help tutors to subtly show empathy to students concerning their assessment, rather than just give direct forms of praise (Falchikov & Boud, 2007). However, it is felt further research is required on the use of downscaling within assignment feedback, so to ascertain whether students are misled as to the level of change that is required of them to improve.

Audio Feedback	**Written Feedback**
Dialogic	Monologic
Aural	Visual
Informal	Formal
Low social evaluation	High social evaluation
Interactional purpose	Ideational purpose
Unedited	Edited
Shared knowledge not assumed	Shared knowledge not assumed
Separated time and space	Separated in time and space

Table 5.21 Comparative scaling of audio and written feedback along the speech-writing dichotomy

In light of these discussions, it is suggested that a more 'informal' and 'conversational' form of feedback, with a focus on interpersonal positioning, is identified by comparing the evaluative language resources employed by tutors when using audio, rather than written, feedback. Such an understanding has been developed by placing the results of this phase of the study in the context of the speech writing dichotomy, which holds relevance to dialogic theory (Bakhtin, 1981; Halliday, 1985/1989). Here it is suggested that audio technology holds the potential to blur the distinctions in evaluative language resources that commonly arise between spoken face-to-face synchronous language and asynchronous written language (see Table 5.21), and subsequently, helps to develop feelings of a more positive discursive relationship between the tutor and student. Consequently, it can be argued that the use of audio feedback may go some way to help tutors reinstate the social-affective

features of dialogic feedback, stressed by Yang and Carless (2013) in their framework. Specifically, this refers to the third and fourth features of dialogic feedback (Yang & Carless, 2013), as tutors may effectively show emotional sensitivity and encourage trusting collaborative relationships through the feedback they provide.

5.6 Conclusion

Chapter Five has presented and discussed the quantitative findings of the secondary analysis of feedback script data included in this study, that aimed to addressed the research question *"How far might the provision of assessment feedback to students using audio recording technology encourage the positive social-affective features of dialogic feedback, when compared to written feedback?"* by supplementing content based interpretations of feedback reported in Chapter Four, with a Hollidayian-inspired linguistic analysis of *how* tutors articulate their feedback comments to students. The analytic framework developed by Martin and White (2005) provided a tool to reflect upon the dyadic relationship created between tutors and students, in light of spectral descriptions of evaluative language (Bakhtin, 1981; Biber, 1988; Halliday, 1985/1989) and the dialogic perspective of interpersonal positioning (Evans, 2013; Varlander, 2008). Specifically, such an analytic approach enabled the identification of evaluative language resources employed by tutors in their feedback and the interpersonal role and function such resources may serve for students. Accordingly, the quantitative data presented from this analysis indicated differences in both the *occurrence* and *variation* of evaluative language resources employed by tutors when utilizing the audio rather than the written feedback modality. Further, when analysing these results in accordance to the theoretical frame (Yang & Carless, 2013), it is believed that the differences in *how* feedback is expressed by the tutor when utilising the audio technology, may help tutors reinstate the features of dialogic feedback categorised into the social-affective dimension of Yang and Carless' (2013) central framework. Consequently, when considered alongside the results presented in Chapter Four of the study, such conclusions imply the enhanced cognitive and social-affective dialogic features of the feedback provided to students using the audio technology. Yet, as noted by Mutch (2003), analysis focusing only on the content of feedback itself, may only make judgements based on the *assumption* that students will *recognise* what is being said. As such, the data presented in the next chapter aims to directly assess student reactions to the content of their feedback when provided using different modalities.

6 STUDENT SURVEY: STUDENT REACTIONS TO AUDIO FEEDBACK

6.1 Introduction

This chapter presents the methodology and quantitative findings for the third type of quantitative data assessed in this study. Unlike data outlined in previous chapters, the data gathered and presented in this chapter is student centred. Specifically, this refers to the data being simultaneously gathered alongside the feedback script data, so to build an understanding of how students may differently *react* to feedback content provided using audio recording technology. As such, this data goes some way to address the following primary research questions from a student perspective:

1. *How far might the provision of assessment feedback to students using audio recording technology encourage the cognitive features of dialogic feedback, when compared to written feedback?*
2. *How far might the provision of assessment feedback to students using audio recording technology encourage the positive social-affective features of dialogic feedback, when compared to written feedback?*
3. *How might the provision of assessment feedback to students using audio recording technology encourage the structural features of dialogic feedback, when compared to written feedback?*

Consequently, this chapter reports the findings of a student end of module survey, whereby the tutor provided all students with audio feedback on their assignments. The survey design was developed by engaging with previous literature utilising survey methodology to investigate audio feedback and via applying the Framework for Dialogic Feedback (Yang & Carless, 2013). As such, this chapter outlines the specific methods of data collection and discusses the development of the survey instrument used for this phase of the study with annotated examples, so to locate the relevance associated to individual questions within the theoretical framework. The chapter then proceeds to outline the quantitative results acquired from this stage of the study and offers a small discussion concerning their ability to help ascertain the dialogic potential of providing audio feedback in higher education.

6.2 Rationale and Quantitative Research Questions

Research suggests students have clear preferences for the type and format of the feedback they receive (Evans, 2013). Most feedback in higher education is provided in written format, yet some students report dissatisfaction with this type of feedback as they often feel it is too confusing and unclear to effectively use to improve their future learning (Cavanaugh & Song, 2014). This study takes a dialogic perspective to overcome student dissatisfaction by holding interest in the provision of verbal feedback in the form of audio files and investigating the potential impact this modality may have on students' use and perceptions of assignment feedback (Yang & Carless, 2013). In previous literature, this mode of feedback has been assessed in application to both formative (e.g. Merry & Orsmond, 2008) and summative (e.g. Ribchester, France & Wakefield, 2008; Roberts, 2008) feedback purposes, with students reporting several advantages with this method of feedback delivery. Importantly, much of this research has focused upon analysing student perceptions and satisfaction with audio feedback without embedding empirical findings within a clear pedagogic rationale. As such, it is proposed that in order to effectively identify further areas of exploration, the findings from previous literature ought to be organised within each of the three dimensions for dialogic feedback defined by Yang and Carless (2013), which forms the theoretical lens of this study.

By the cognitive dimension, Yang and Carless (2013) refer to the quality of feedback content provided to students and its impact on a student's ability to actively engage and use their feedback to become a self-regulative learner. Focusing upon the perceived quality of content, studies indicate that in comparison to written comments, students often report that audio comments are clearer (Roberts, 2008) and provide strategies for solving issues founded within students' work rather than just stating what these issues are (Merry & Orsmond, 2008; Rotherham, 2008). Relatedly, the increased quality of content thought to be provided within the audio comments is believed to impact upon students' active use of their feedback (Wood, Moskovitz & Valiga, 2011). In terms of encouraging student engagement, research suggests students feel they engage more deeply with audio feedback (Ribchester, France & Wakefield, 2008) and are more likely to open their audio feedback than their written (Lunt & Corran, 2010). Interestingly, although deemed important by Yang and Carless (2013) within their features of effective feedback (see Table 2.5 in Chapter 2), relatively few studies have focused upon the potential ability of audio feedback to encourage students to feedforward their tutors' feedback comments to improve on future assignments.

Within the social-affective dimension, Yang and Carless (2013) outline feedback as a social and relational process whereby the management of relationships represents a source of emotions, which may significantly impact a student's ability to self-regulate their own learning. Thus far, there is comparatively little research available in this area. However, of the literature available it may be suggested that students are able to engage with feedback provided using the audio modality at a more personal level than written feedback (Ice, Curtis, Phillips & Wells, 2007; Morris & Chickwa, 2016; Merry & Orsmond, 2008). As well as a personal feel, other research has reported that students found receiving audio comments, even for challenging assignments, made them become more confident in their writing because they felt it "provided more genuine and frequent praise" (Sipple, 2007, p. 24). Similarly, one study reported students felt asynchronous audio and text based feedback increased teaching presence on online learning platforms and distance learning courses (Rockinson-Szapkiw, 2012). Yet, further research is needed to ascertain the true potential of this technology in developing collaborative and trusting teacher-student relationships, which holds importance within Yang and Carless' (2013) features of effective feedback (see Table 2.5 in Chapter 2).

When defining the structural dimension, Yang and Carless (2013) denote importance to the tutors use of resources for providing feedback, which includes issues of students' satisfaction concerning the practicalities of feedback provision, such as the flexibility of the timing, sequencing and mode of feedback used. Focusing upon student satisfaction with the use of the audio modality, there appear to be mixed findings reported in the literature. Differences in the delivery of this mode of feedback arise in the literature, with some students preferring audio feedback as an *alternative* approach to written feedback (McGarvey & Haxton, 2011) and some students preferring a *blended* approach, pairing traditional written annotation with an audio file. Further research is needed to understand the potential cognitive differences and/or benefits of providing a blended versus alternative approach to feedback. Similarly, student satisfaction with the audio modality appears to be somewhat dependent upon the software used to provide the audio file. Chiang (2009) focuses on the optimal use of different means of providing students with audio feedback, suggesting students feel emailed MP3 audio recordings to be suited to posters and presentations that are not submitted electronically, whereas students feel embedded audio files within PDF files or Microsoft Word documents are best used for electronically submitted assignments. However, with increased use of online learning environments, it may be assumed many tutors now utilise institutional virtual learning environment (VLE) tools for providing audio feedback to students (Dixon, 2015). The most commonly used online grading system used in UK higher

education institutions is Turnitin Grademark©, which recently implemented an inbuilt voice comment tool that records the tutor speaking their feedback for up to three minutes (Turnitin, 2018a). Yet, little research appears to have been conducted focusing upon student satisfaction with this new platform of delivery.

The literature discussed above has provided valuable contributions to research on the use of audio technology in giving feedback to students. However, as there is a lack of studies in the literature that have directly analysed the potential of this feedback modality grounded in pedagogic theory (see Nortcliffe & Middleton, 2009), not all the features of dialogic feedback stressed by Yang and Carless (2013) are fully explicated within the current literature assessing student perceptions of receiving feedback using the audio technology. Considering this, claims may not be fully made concerning the extent to which students perceive audio feedback to encourage the six features of effective dialogic feedback (see Table 2.5 in Chapter 2) proposed by Yang and Carless (2013) in their three-factor framework. As such, this phase of the study aims to support and extend upon what previous studies have found by further investigating student perceptions of receiving audio feedback embedded within a clear pedagogic rationale. Thus, the following sub-research questions have been formulated to guide this stage of the study:

1) *How far might the use of audio recording technology encourage the social-affective features of dialogic feedback, when compared to written feedback?*
   a) Between audio and written feedback, which do students believe better encourages positive emotional responses when receiving assignment feedback?
   b) Between audio and written feedback, which do students believe is a more effective means of interaction with their instructor?
   c) Between audio and written feedback, which do students believe better encourages tutor/student interaction that usually occurs in face-to-face classes?

2) *How far might the use of audio recording technology encourage the cognitive features of dialogic feedback, when compared to written feedback?*
   a) How do students use feedback provided in audio format to support their learning and how does this differ to their use of written feedback?
   b) How clearly can students understand and interpret the content of feedback provided in audio format and how does this differ to written feedback?

3) *How might the use of audio recording technology encourage the structural features of dialogic feedback, when compared to written feedback?*
   a) What modality of feedback would students prefer to receive for other modules in the future?
   b) What improvements do students feel could be made to audio feedback provided using Turnitin Grademark©?

6.3 Methodology

6.3.1 Ethical Considerations

The Psychology Departmental Ethics Committee at Aberystwyth University approved the protocol for this element of the study to ensure the ethical treatment of all participants (see Appendix B and C). To elaborate upon the key issues within the report, as the survey was administered online using Jisc Online Surveys© all potential participants were provided information about the survey and the use of the data via web form. Hence, if informed consent was not given the survey would cease.

6.3.2 Use of Audio Feedback and Instructional Setting

This study was conducted through two undergraduate second-year modules delivered in the Psychology Department at Aberystwyth University, whereby the tutor had chosen to provide the class audio feedback on their summative and formative assignments. The first of these modules, 'Forensic Psychology', was taught traditionally using seminars and lectures. To meet the conditions of the course within this module, students were asked to submit one summative assignment at the end of the module, for which their tutor subsequently provided them with audio feedback using Turnitin Grademark©. Alongside audio commentary, students were also provided some written pointers using the in-text comment tool available on Turnitin Grademark©. This allowed the tutor to pinpoint the issues noted in the audio commentary directly in the assignment. For example, the tutor phrased this as: "*referencing error – see audio file for explanation*".

The second module, 'Drugs and Behaviour', was taught online using materials provided on the online learning platform called 'Blackboard'. While this was an online module, students were encouraged to visit their tutor in person for additional feedback on their assignments or for any further support. The assessment unit for this module consisted of

four parts: three discussion forum contributions and one end of course essay. The discussion forum contributions took place on a specially designed page on 'Blackboard' that allowed peers and tutors to textually communicate. Using this platform, students were first asked to contribute to the discussion by answering a short essay question set by the tutor for all students. Students were then required to post their (750-word maximum) response to this question, alongside two short (250-word maximum) responses to their peers' posts that further discussed the relevant literature. Students' participation in the first discussion forum was marked formatively using audio feedback, so that students could gain a full understanding of what was required in the online course. The final two discussion forum contributions were summative and each counted as 25% of their overall grade for the module. The final assessment for this module was an essay and, similar to all of the discussion forum contributions, the tutor provided students with audio feedback. As with the 'Forensic Psychology' module, the tutor for this module also provided some written pointers using the in-text comment tool available on Turnitin Grademark© to further pinpoint issues explained in the audio commentary.

6.3.3 Participants

As the analysis of feedback scripts (presented in Chapters 4 and 5 of this thesis) utilised feedback provided previously by tutors in the 2016-17 academic year, it was not possible to recruit students from this module cohort. The rationale for this decision was that it was felt that the students from this module cohort would not remember their initial responses to their feedback almost a year from when they initially were provided with it. As such, a module providing audio feedback was needed within the 2017-2018 academic year. However, given the lack of teachers engaging with audio feedback as evidenced in the Tutor Survey (Appendix E) the researcher had to utilise their own modules to provide audio feedback for this phase of the research. For a discussion of the issues surrounding this decision refer to Sections 8.5 and 8.6 of this Thesis.

For the semester in which this study occurred, enrolment consisted of 51 undergraduate students for the module 'Forensic Psychology' and 21 undergraduate students for the module 'Drugs and Behaviour'. An email was sent to all students during the last week of their course asking for volunteers to participate in an end of module online survey. For completion of the survey, students, if they chose, would be entered into a prize draw to receive a £10 Amazon Voucher. Incentives were used encourage students to participate due

to the decline in survey response rates within student populations (Cole, Sarraf & Wang, 2015). Twenty-two students partaking in the module 'Forensic Psychology' responded and volunteered to participate in the survey, alongside three students from the module 'Drugs and Behaviour'.

6.3.4 Survey Instrument

The survey instruments used within this stage of the study were designed by consulting both previous literature and the theoretical frame for which the research questions were based. Survey based research assessing student opinions on the use of audio feedback by their tutors is not unusual (e.g. Ice, Curtis, Phillips & Wells, 2007). As such, authors of select articles were contacted and some agreed to provide copies of their previous survey questions for consultation (Attenborough, Gulati & Abbot, 2012; Ekinsmyth, 2010; Merry & Orsmond, 2008; Wakeman & McFarlane, 2011). These survey questions were used so to understand how the authors obtained quantitative results concerning the sensitive issue of the emotional elements of feedback (e.g. Attenborough, Gulati & Abbot, 2012) and students' use and engagement with the audio as opposed to the written modality (e.g. Ekinsmyth, 2010), which were issues of interest within the research questions for this study. A breakdown and rationale for the adaption of some of the survey questions developed by these authors (Attenborough, Gulati & Abbot, 2012; Merry & Orsmond, 2008; Wakeman & McFarlane, 2011) is provided in Appendix S.

Considering the differences in instructional setting between the two modules of focus for this study, two questionnaires were developed to fulfil the specific course requirements. Both surveys were divided into four sections: I) Using Audio Feedback, II) Understanding the Content of Audio Feedback, III) Social Elements of Receiving Audio Feedback, and IV) Enhancing Audio Feedback. Similarly, both surveys consisted of a series of closed questions whereby students were asked to indicate their level of agreement with a series of statements on five-point Likert scales, Unipolar rating scales, and Semantic Differential scales. Importantly, the same scales and question phrasing was used in sections two to four in both of end of module surveys. However, some of the survey questions differed somewhat in phrasing under the section 'Using Audio Feedback' due to differences in the assessment methods between the two courses (see Table 6.1 for an example). Please see Appendix T and U.

Forensic Psychology Survey	Drugs & Behaviour Survey
1. Did you listen to the audio feedback you were given on your assignment during this module? a) Yes b) No	1. Of the four pieces of audio feedback you received in this module, how many did you listen to? a) I listened to all four of my audio files b) I listened to 3 of my audio files c) I listened to 2 of my audio files d) I listened to 1 of my audio files e) I didn't listen to any of my audio files

Table 6.1 An example of the difference in question phrasing in section one of both surveys

Finally, the survey questions were specifically designed to appropriately address the theoretical frame and research questions for this phase of the study. To elaborate upon the relevance of the questions used in the surveys, Table 6.2 provides an example question from each of the four sections in the survey, the aligning research question it was designed to address and the corresponding positioning held within the Framework for Dialogic Feedback (Yang & Carless, 2013). Both surveys were built and administered online using Jisc Online Surveys©.

Survey Section	Survey Question	Corresponding Sub-Research Question	Positioning in Framework for Dialogic Feedback (Yang & Carless, 2013)
1) Using Audio Feedback	How many times did you listen to your audio feedback? a) Once b) Twice c) Three times d) Four times e) Five times f) Six or more	How do students use feedback provided in audio format to support their learning and how does this differ to their use of written feedback?	Cognitive Dimension
2) Understanding the Content of Audio Feedback	Please rate how far you agree or disagree with the statement: "My audio feedback conveyed the tutors tone of voice which added more depth of explanation than the written comments I have received in the past"	How clearly can students understand and interpret the content of feedback provided in audio format and how does this differ to written feedback?	Cognitive Dimension
3) Social Elements of Receiving Audio Feedback	Please rate how far you agree or disagree with the statement: "Audio feedback helped motivate me and develop my self-	Between audio and written feedback, which do students believe better encourages positive emotional responses when receiving	Social-affective Dimension

	esteem more so than written feedback"	assignment feedback?	
4) Enhancing Audio Feedback	If given the choice, would you choose to receive audio feedback, rather than written feedback, for other modules in the future?	What modality of feedback would students prefer to receive for other modules in the future?	Structural Dimension

Table 6.2 Examples of survey questions addressing the research questions and positioning within the theoretical frame

6.3.5 Data Analysis

Of the twenty-five respondents to the survey, three respondents did not fully complete all available questions. While each respondent failed to complete different scales[1], the mean number of missing values per respondent equated to seven. Importantly, all students with missing data were students from the Forensic Psychology Module. In order to deal with this missing data, the researcher conducted imputation using mean substitution by replacing each missing value with the mean of that variable. This was the favoured type of imputation as it would least impact the final descriptive analysis of the results. To ensure no impact was made due to the imputation method, descriptive statistics were carried out using SPSS on a data set that excluded any responses with missing values and also a data set in which the mean substitution was implemented. Of note, this data set was of Forensic Psychology student respondents only. The results of these two SPSS outputs were then compared and it was found that the overall results remained the same (see Appendix V and Appendix W for the results of these two SPSS descriptive outputs for the Forensic Psychology Module cohort). Considering this, descriptive statistics were then used to calculate Frequencies, Mean scores and the Mode of scaled responses, so to describe student opinions from both modules concerning audio feedback. Graphs were also generated in some cases to visually present the findings.

6.4 Findings

Meaningful results of analysing each data source are provided in the sub-sections below. Results are presented so to align with the primary research questions for this element of the study, rather than presenting the results in line with the four sections of the survey.

[1] To provide individual comment on participant's missing data: one participant did not complete questions 9 to 10, another did not answer questions 12 to 13, and the final participant did not complete question 6. All participants with missing data were from the Module Forensic Psychology.

Consequently, three sub-sections are formed concerning the three dimensions of dialogic feedback and student perceptions outlined in the survey. This structure will also be utilised later in the chapter when reporting the discussion and conclusions for this stage of the study.

6.4.1 The Cognitive Dimension and Student Perceptions

When combining the survey responses given by student cohorts concerning their use of audio feedback, 76% of students reported that they listened to their feedback two (N=13) to three (N=6, M=2.36, SD=.86) times. Interestingly, most students reported that they would listen to their audio feedback again when preparing for both a future assignment from the same module (Drugs & Behaviour Module: N=2, Mo=1, SD=.57) and for an assignment in a different module (Forensic Psychology Module: N=21, Mo=1, SD=.21). The results indicate students active use and engagement with their audio feedback.

Please rate how strongly you agree or disagree with the following statements about the audio feedback you received in this module:	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
My audio comments were more detailed in their explanation of issues than written comments I have received in the past	9	12	1	3	0
	36%	48%	4%	12%	0%
				Mean	1.92
				SD	.95
My audio comments were provided in language that was easier for me to understand than written comments I have received in the past	9	7	8	1	0
	36%	28%	32%	4%	0%
				Mean	2.0
				SD	.93
My audio feedback helped me to understand disciplinary specific terms (e.g. critical analysis), more so than written comments I have received in the past	8	11	2	3	1
	32%	44%	8%	12%	4%
				Mean	2.1
				SD	1.12
Listening to the spoken comments provided me with greater clarity than written comments I have received in the past	10	13	1	1	1
	36%	52%	4%	4%	4%
				Mean	1.8
				SD	.97
My audio comments conveyed the tutors tone of voice which added more depth of explanation than written comments I have received in the past	10	9	3	2	1
	40%	36%	12%	8%	4%
				Mean	2.0
				SD	1.11

Table 6.3 Descriptive statistics of student responses to five statements concerning the content of their audio feedback (1=strongly agree; 5=strongly disagree)

In the survey, most students from both modules reported that when using their audio feedback, they found it to be either 'Extremely' (N=14) or 'Very Useful' (N=9, M=1.56, SD=.76). Often students also positively compared the usefulness of audio feedback to written feedback, stating it to be 'Much More' (N=10) or 'More Useful' (N=7, M=1.96, SD=.93) than the written feedback they have received in the past. This may be elaborated by other results. For example, respondents were asked to rank their agreement (1=strong agreement, 5= strong disagreement) with a number of statements (see Table 6.3). In reviewing students ranking a high level of agreement may be reported, as the majority of students expressed beliefs that the spoken nature of audio feedback provided them with greater detail, clarity, and understanding of what they need to do to improve, than did the written feedback they had received in the past. The results suggest student perceptions concerning the enhanced quality of the audio feedback content and its subsequent ability to effectively engage them in disciplinary problems.

6.4.2 The Social-Affective Dimension and Student Perceptions

When combining the survey responses given by student cohorts concerning the social and emotional impact of audio feedback, 96% of all students agreed that receiving audio feedback feels more personal than receiving written feedback. This perspective is furthered by other results. For example, respondents were asked to score their agreement (1=strong agreement, 5= strong disagreement) with a number of statements (see Table 6.4). In reviewing students scoring a high level of agreement may be reported, as the majority of students felt receiving audio feedback better developed their self-esteem and allowed them to sense their tutor's presence, interest and caring about their learning, more so than when receiving written feedback. These results indicate the provision of feedback using audio technology may create more positive interpersonal relationship between the tutor and the student, which was further suggested when reviewing additional survey items. Specifically, this refers to the 96% of respondents who agreed that their audio feedback promoted the approachability of their tutor and the 84% who felt receiving audio feedback better encouraged peer and tutor conversations about their learning. Therefore, the results may suggest the use of audio technology may help to facilitate student-tutor interaction and good interpersonal relationships within the feedback process.

Please rate how strongly you agree or disagree with the following statements about the audio feedback you received in this module:					
	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Audio feedback feels more personal than written feedback	15	9	1	0	0
	60%	36%	4%	0%	0%
				Mean	1.44
				SD	.58
Audio feedback helped me to experience my tutor's presence and interest in my learning more so than written feedback	13	7	5	0	0
	52%	28%	20%	0%	0%
				Mean	1.68
				SD	.80
Audio feedback reflects a sense of caring in my tutor more so than written feedback	12	10	0	3	0
	48%	40%	0%	12%	0%
				Mean	1.76
				SD	.96
Audio feedback helped to motivated me and developed my self-esteem more so than written feedback	7	11	4	3	0
	28%	44%	16%	12%	0%
				Mean	2.12
				SD	.97
Audio feedback encouraged more peer and tutor conversations about learning	9	12	4	0	0
	36%	48%	16%	0%	0%
				Mean	1.8
				SD	.70
Audio Feedback promoted the approachability of my tutor	13	11	1	0	0
	52%	44%	4%	0%	0%
				Mean	1.52
				SD	.58

Table 6.4 Descriptive statistics of student responses to five statements concerning social-affective implications of receiving audio feedback (1=strongly agree; 5=strongly disagree)

6.4.3 The Structural Dimension and Student Perceptions

After combining the survey responses given by both student cohorts, 68% of respondents stated that if given the choice they would chose to receive audio rather than written feedback on other modules in the future (N=17, Mo=1, SD=.47). Refer to Figure 6.1 to see this finding presented visually. Yet, when asked about how they felt their audio feedback could be improved it became apparent that the provision of both written in-text comments and the audio file was more welcomed by students. Of the 25 respondents, 76% stated that audio feedback was improved by using the combination of audio and in-text comments (N=19, Mo=1, SD=.43).

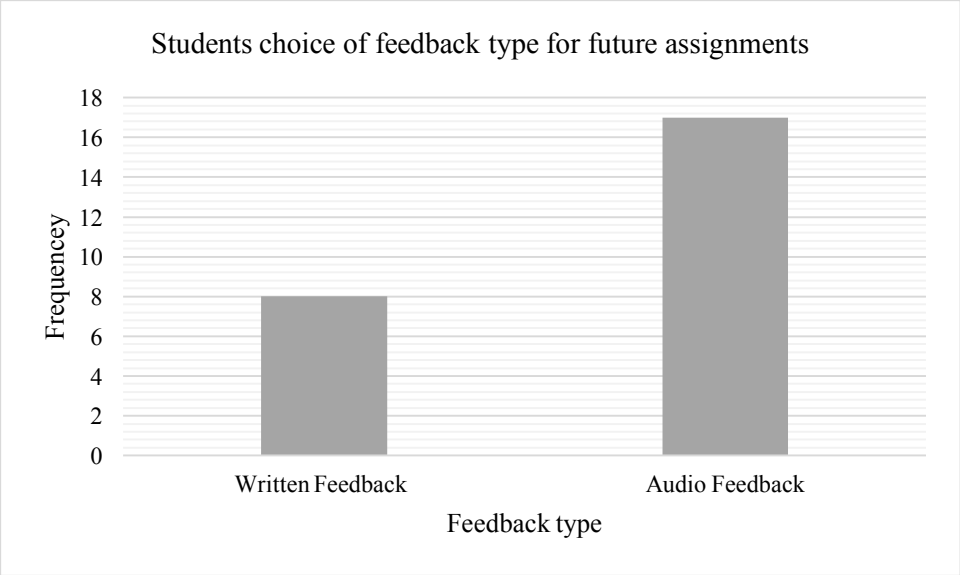

Figure 6.1 A bar chart presenting all students preference for the modality of the feedback they receive on future assignments

Focusing upon Figure 6.2, a further key finding from the survey was the issue of the three-minute recording time set by Turnitin Grademark©. Nearly half of the students (N=12, Mo=2, SD=.51) reported that audio feedback could be improved by Turnitin Grademark© allowing a longer recording time for the tutor to speak their feedback. However, most students reported that audio feedback was 'About the Right Length' when questioned earlier in the survey (N=19, 76%, M=1.76, SD=.43). These results indicate a confusion over student preference concerning the appropriate length of audio feedback, alongside a positive acceptance of blended feedback.

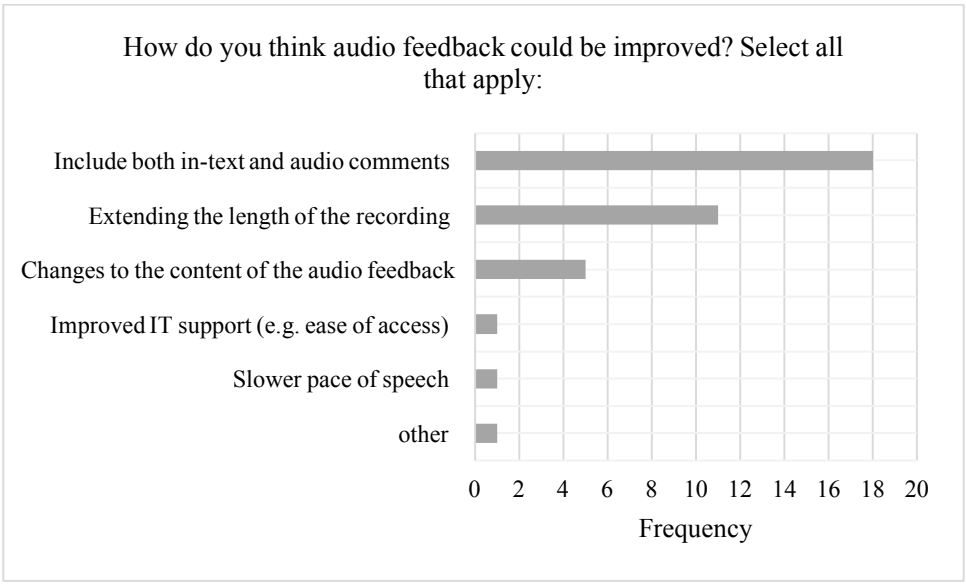

Figure 6.2 A horizontal bar chart presenting all students perceptions concerning how audio feedback may be improved

6.5 Discussion

The data presented expanded upon previous chapters, by examining student reactions to the use of audio feedback within the three dimensions of dialogic feedback outlined by Yang and Carless (2013). Primarily, the investigation revealed a strong student preference for asynchronous audio feedback, compared to traditional written or text based feedback. When these findings are discussed in relation to previous literature, it is believed that asynchronous provision of audio feedback merits consideration in the development of an increasingly dialogic form of feedback in higher education (Yang & Carless, 2013).

In the analysis, the results provided evidence which suggests that the majority of students feel the provision of feedback using audio recording technology better facilitates the cognitive features of dialogic feedback outlined by Yang and Carless (2013), when compared to written or text based feedback. Concerning the content of audio feedback, in responding to the survey students often expressed beliefs that its spoken nature provided them with greater detail, clarity, and understanding of what to do to improve (see Section 6.4.1). These results support and elaborate upon conclusions drawn in previous literature (e.g. Merry & Orsmond, 2008; Roberts, 2008; Rockinson-Szapkiw, 2012), which outline student perceptions of the enhanced quality of content of audio forms feedback due to the richness that speech affords (Rotheram, 2009). In particular, the results confirm the conclusions drawn by Laughton (2013), who commented upon the communicative features of audio feedback. Through assessing the results of an end of module student satisfaction survey, Laughton (2013) suggested written feedback often incorporates academic buzzwords that students find difficult to comprehend and make use of (e.g. 'Include more *critical analysis'*), whereas audio feedback allows for a more communicative approach by 'unpacking' these disciplinary specific terms and issues for students, which facilitates their ability to actively interpret key elements of their feedback. Relatedly, the survey results also suggest that students better engaged with their audio feedback, as they often reported a want to listen to their audio feedback again when preparing for a future assignment (see Section 6.4.1). It is believed further research is needed so to understand the correlation arising between the enhanced clarity of audio feedback and students' want to feedforward their tutor's audio comments to improve their future work. As such, the results appear to offer the possibility of embodying principles one and two of Yang and Carless' (2013) framework, as it is suggested students

may be encouraged to engage with disciplinary problems and have an active role in processing and using their feedback.

The results of the survey also revealed strong student perceptions that infer the provision of feedback using audio recording technology better facilitates the social-affective features of dialogic feedback stressed by Yang and Carless (2013). The survey results outlined in Section 6.4.2, suggest that students believe the audio technology provides them with a more personal form of feedback, which allows them to sense their tutors' caring and encourages positive motivational beliefs around the feedback process. Previous research supports these results (Bond, 2009; Dagen, Mader, Rinehart, & Ice, 2008; Ice, Curtis, Phillips, & Wells, 2007; Wood, Moskovitz & Valiga, 2011) by suggesting care, emotional sensitivity and personal connectivity are communicated through the use of spoken language, which includes nuance and intonation of voice (Nortcliffe & Middleton, 2011; Rockinson-Szapkiw, 2012); something that is difficult to achieve with written or textual methods. Similarly, while some studies suggest asynchronous audio feedback decreased social distance between the marker and student (Ice, Curtis, Phillips, & Wells, 2007), the results of this analysis go some way to further this finding by suggesting students perceive their tutor as more approachable after receiving audio feedback. Although such findings may be partially explained though the intimate and communicative nature of speech (Ice, Curtis, Phillips, & Wells, 2007), further research is needed to determine the role audio feedback plays in developing this type of interpersonal relationship. The findings align with principles three and four of Yang and Carless' (2013) framework, as it is suggested students feel tutors are more able to show emotional sensitivity and develop trusting relationships though the provision of audio, as opposed to written, feedback.

Of final consideration, this phase of the study also gathered results pertaining to the structural dimension of Yang and Carless' (2013) framework, which overarchingly suggest student satisfaction with Turnitin Grademark© as a platform to provide audio feedback (see Section 6.4.3). However, it is important to recognise that the results of this study do not imply student preference for the *replacement* of written feedback with audio, rather the *integration* of voice comments as a feedback summary and in-text written comments placed directly on the student's assignment. This result is consistent with previous findings (Rockinson-Szapkiw, 2012), which suggest students prefer a blended approach to feedback provision, despite reporting a primary preference for the audio modality. Unfortunately, student perceptions concerning the benefit of this blended approach are little understood. Similarly, the analysis also reports contradictory findings concerning student satisfaction with

the length of the audio file, of which Turnitin Grademark© restricts to three minutes of recording. While most students reported their audio feedback was about the right length, some students felt the quality of the audio feedback could be improved by increasing its length. Problematically, this issue is hard to 'unpick' as most studies do not specify the average length of the audio feedback provided by tutors (Dixon, 2015). If related to general feedback literature, some authors (Race, 2005; Sadler, 2010) argue that *more* feedback is not necessarily *better* feedback, as it may overtly confuse students and detract from the key messages being conveyed by the tutor. If the benefits and/or shortcomings of the voice commenting feature on Turnitin Grademark© are to be further explicated, more research is needed concerning student preferences for longer feedback to build an understanding of how this may impact student engagement with their feedback. Therefore, while providing feedback using audio technology inherently addresses principle six of Yang and Carless' (2013) framework, further investigation is needed as to the extent to which Turnitin Grademark© provides a flexible platform for its effective delivery.

In sum, this phase of the study primarily sought to investigate student perceptions surrounding the provision of audio feedback, in relation to the three-factor framework for dialogic feedback outlined by Yang and Carless (2013). Such an investigative focus was held due the wealth of literature critiquing the traditional method of written feedback (Carless, 2011). In light of the results from this phase of the study, it is suggested that audio feedback may provide a means for facilitating an increasingly dialogic form of feedback in higher education, when contrasted to traditional written feedback. This is as the empirical data gathered in this phase of the study, confirms and extends upon what previous studies have found when assessed within both the cognitive and social-affective dimensions of dialogic feedback outlined by Yang and Carless (2013). However, further explanatory investigation is required concerning issues arising in the structural dimension, focusing upon the extent to which students perceive Turnitin Grademark© to facilitate a *flexible* platform for its effective delivery.

6.6 Conclusion

Chapter Six has presented and discussed the third set of quantitative findings gathered in phase one of the study, which aimed to address how far students perceive asynchronous audio feedback to facilitate the six features of effective dialogic feedback (Yang & Carless, 2013). The survey tool was developed by consulting both previous literature (e.g. Attenborough,

Gulati & Abbot, 2012; Merry & Orsmond, 2008; Wakeman & McFarlane, 2011) and the theoretical frame for the study (Yang & Carless, 2013). Specifically, such a methodological approach supplemented the comparative analysis of '*what*' feedback tutors provide to students on their assignment (see Chapters 4 and 5), with an analysis of how students *themselves* feel they receive and interact with such comments (Dixon, 2015). Accordingly, the quantitative data presented from this analysis suggest students perceive audio feedback to encourage features from each of the three dimensions of dialogic feedback outlined by Yang and Carless (2013). However, the quantitative analysis offered in the previous three chapters (Chapters 4, 5 and 6) only provides a deductive understanding of the experiences of students receiving audio feedback in higher education (Dixon, 2015). As such, the qualitative analysis presented in the following chapter aims to add depth and further explain the quantitative findings of this study by providing participants a voice about their experiences.

7 STUDENT INTERVIEWS: DEVELOPING STUDENT VOICE

7.1 Introduction

This chapter reports the methodology and findings for the second phase of the study, whereby the collection of qualitative data held the clear aim of providing additional depth and further explaining the data collected in the quantitative phase of the study (Tashakkori & Teddlie, 2003). Consequently, this chapter first outlines the rationale for this study, which holds a strong focus upon explaining what quantitative findings have been integrated to formulate the research questions for this qualitative phase. After the rationale and sub-research questions are provided, the methods of data collection are discussed. Qualitative data were gathered via student interviews. A thematic analysis of this data not only explained and explored the quantitative findings but added depth and richness to the data. Importantly, it gave participants a voice about their experiences. As stated in Chapter Two, the mixed method phenomena under investigation in this study, i.e. emotional impact of feedback, are highly subjective. It is clear in the literature that although students share similar experiences of receiving audio feedback, there is no 'blueprint' for how students react in these situations (Merry & Orsmond, 2008). Thus, the following chapter aims to further represent the voice of the participants in the study, add strength to the quantitative data, and ensure a thorough exploration of the dialogic potential of providing audio feedback in higher education.

7.2 Rationale, Integration and Qualitative Research Questions

There is an argument in the dialogic literature for the need to pay attention to the experiences of students receiving feedback in higher education (Higgins, Hartley, & Skelton, 2001). Questions concerning the *experiences* of students have been identified by Livingstone (2012), as "what is really going on, how can this be explained, and how could things be otherwise?" (p. 9). In consideration of these questions, Dixon (2015) proposes that the adoption of solely quantitative methodology in the literature indicates a shift away from the dialogic process that the use of audio feedback may offer; representing a potential disjuncture between methodology and epistemology. Elaborating upon this, Dixon (2015) outlines literature using statistical analysis (e.g. Nortcliffe & Middleton, 2007; Rockinson-Szapkiw, 2012) and suggests these studies can only provide an empirical and deductive view of theory. This is as quantitative methods of analysis appear to be at odds with an investigation viewing feedback as a process, which aims to facilitate communication and understanding, and fails to

recognise the "very humanness of human respondents" (Dixon, 2015, p. 102). As Price, Millar, Handley and O'Donovan (2010, p. 285) stress, "measuring the extent of the relational dimension cannot be reduced to observable inputs or outputs…this crucial element can only be measured by the participants in the relational process", and the adopted methodology for this phase of the study aims to address this issue.

Qualitative research methods are a means of understanding social phenomenon from the perspective of those involved (Creswell, 2015). Such methods, aim to interpret and understand how various participants in a social setting may differently construct the world around them (Creswell, 2015). In this mixed methods study, the qualitative phase is displayed diagrammatically in lower case letters; however, this data will explore, explain, and enrich the quantitative phase of the study by providing a more holistic and complete understanding of the phenomenon (Creswell & Plano Clark, 2007). Qualitative data collection for this phase of the study utilized in-depth semi-structured interviews with students who received audio feedback. As this study used explanatory sequential design, Table 7.1 presents a matrix derived from the quantitative data which identified issues and topics to form the foundation of more in-depth exploration (Tashakkori & Teddlie, 2003). The interviews enabled the researcher to understand the affordances of audio feedback by considering the self-expressed experiences of students in higher education. The aim is to answer the mixed method question:

1. In what way does the semi-structured in-depth interview help explain the experiences of students receiving audio feedback reported within the quantitative results?

More specifically, results were identified for follow-up from phases one to three of the quantitative study and formed sub-research questions to guide the current qualitative phase. These questions were broad, intending to capture student voice.

Sub-research questions identified from content based interpretations presented in Chapter Four of the thesis:

1. What are student perceptions concerning the depth of tutors' feedback comments when providing audio as opposed to written feedback?

Quantitative Data Type:	Identified Result To Follow-up:	Reason For Follow Up:	Qualitative Research Question:
Content Analysis of Feedback Scripts	Enhanced depth of feedback comment given in audio feedback	Interesting difference arising between the two modalities. Need to understand whether students recognised this depth within their feedback and how/if it impacted their ability to use their feedback to further their learning.	What are student perceptions concerning the depth of tutor's feedback comments when providing audio as opposed to written feedback?
Linguistic Analysis of Feedback Scripts	More active use of 'Informal' or 'conversational' language within audio feedback i.e. use of colloquial register and personal pronouns	Significant difference in the use of language used in the two types of feedback which is thought to impact the relationship created between the tutor and student. Need to understand whether students recognised this more conversational style and whether they thought it impacted their emotional reception with their feedback.	What are student perceptions concerning the formality of the language used by tutors when providing audio as opposed to written feedback?
Student End of Module Survey	96% of respondents agreed that their audio feedback promoted the approachability of their tutor 84% felt receiving audio feedback better encouraged peer and tutor conversations about their learning	Extreme case as high number of students reported their agreement with both of these scales. There is a need to understand students self-reported accounts of why they reported their agreement with these scales.	Why do students believe audio feedback better encourages tutor/student interaction that usually occurs in face-to-face classes?
	The majority of students felt receiving audio feedback better developed their self-esteem (72%) and allowed them to sense their tutor's presence, interest (80%) and caring (88%) about their learning, more so than when receiving written feedback.	Extreme case as high number of students reported their agreement with all of these scales. There is a need to understand what students perceive it is about their audio feedback that encourages these positive emotional feelings.	Why do students believe that receiving audio feedback better encourages positive emotional responses when compared to written feedback?
	76% of students reported that they listened to their feedback two (N=13) to three (N=6, M=2.36, SD=.86) times. Most students reported that they would listen to their audio feedback again when preparing for both a future assignment from the same module (Drugs & Behaviour Module: N=2, Mo=1, SD=.57) and for an assignment in a different module (Forensic Psychology Module: N=21, Mo=1, SD=.21)	Extreme result as a high number of students reported active engagement with their audio feedback. There is a need to understand what students perceive it is about their audio feedback that encourages them to utilise it to improve their future work.	Why do students use feedback provided in audio format more productively to support their learning than feedback provided in written format?
	88% of students expressed beliefs that audio feedback provided them with greater clarity and understanding of what they need to do to improve, than did the written feedback they had received in the past.	Extreme result as a high number of students reported their agreement with this scale. There is a need to understand what students perceive it is about their audio feedback that enables them to better understand what it is their tutor is aiming to convey about their work.	Why do students feel the content of feedback provided in audio format is clearer to understand and interpret than feedback provided in written format?
	76% stated that audio feedback was improved by using the combination of audio and in-text comments	Interesting result reported by students in the survey. There is a need to understand why students feel this and also how they feel this blend may be best implemented in practice.	Why do students want audio feedback combined with in-text written comments?
	Nearly half of the students (N=12, Mo=2, SD=.51) reported that audio feedback could be improved by Turnitin Grademark© allowing a longer recording time for the tutor to speak their feedback. However, most students reported that audio feedback was 'About the Right Length' when questioned earlier in the survey (N=19, 76%, M=1.76, SD=.43).	Interesting result as there appears to be disparity in students reports. There is a need to understand why some students feel the length of their recording should be extended and why others feel it should not.	Why do some students believe the length of audio feedback should be extended?

Table 7.1 Matrix derived from the quantitative data to identify issues and topics for exploration within the qualitative phase of the study

Sub-research questions identified from linguistic based interpretations presented in Chapter Five of the thesis:

2. What are student perceptions concerning the formality of the language used by tutors when providing audio as opposed to written feedback?

Sub-research questions identified from the student end of module survey presented in Chapter Six of the thesis:

3. Why do students believe that receiving audio feedback better encourages positive emotional responses when compared to written feedback?

4. Why do students believe audio feedback better encourages tutor/student interaction that usually occurs in face-to-face classes?

5. Why do students use feedback provided in audio format more productively to support their learning than feedback provided in written format?

6. Why do students feel the content of feedback provided in audio format is clearer to understand and interpret than feedback provided in written format?

7. How do students want audio feedback combined with in-text written comments on Turnitin Grademark©?

8. Why do students believe the length of audio feedback should be extended on Turnitin Grademark©?

7.3 Methodology

7.3.1 Ethical Considerations

The Psychology Departmental Ethics Committee at Aberystwyth University approved the protocol for this phase of the study to ensure all participants were treated ethically (see Appendix B and C). Due to the qualitative nature of this phase of the study, one of the key issues raised in this report was the voicing of negative comments by students. Students have

avenues to raise any concerns over feedback or other teaching related issues through existing departmental/institute structures at Aberystwyth University. Therefore, all participants were told in advance that no action will be taken over comments made and that the interviews were for research purposes only. Advice on the appropriate channels (Tell Us Now, etc.) was provided to students if they wished to follow-up any specific issues via the appropriate established university channels. Further ethical details concerning the process of the interview (e.g. obtaining informed consent, detailing the participants' right to withdraw, and the storing of data) are detailed in Section 7.3.3 of this chapter.

7.3.2 Participants

Due to the sequential nature of the research design employed in this study, convenience sampling was used to recruit individuals who had received audio feedback on their summative and/or formative assignments in either the second-year undergraduate module 'Forensic Psychology' or 'Drugs and Behaviour' at Aberystwyth University. Students partaking in either of these modules were recruited initially as part of the survey study through email. While conducting the survey, the researcher invited participants to volunteer for interviews to further express their experience of receiving audio feedback though Turnitin Grademark©. For their participation, each student would be given a £10 Amazon Voucher. Similar to the survey phase of the study, the decision to provide an incentive was made due to the recent decline in students partaking in research (Cole, Sarraf & Wang, 2015). Of the twenty-five students who responded to the survey, two students from the module 'Drugs and Behaviour' and six students from 'Forensic Psychology' agreed to take part in the follow-up interviews.

7.3.3 Interview Schedule and Procedure

Data were gathered through in-depth, semi-structured interviews. The interviews were 25 to 30 minutes in duration and included questions related to Yang & Carless' (2013) three factor framework for dialogic feedback. Questions were developed to expand upon quantitative responses to the student survey. For example, quantitative data identified that 96% of students also either 'Strongly Agreed' or 'Agreed' that receiving audio feedback promoted the approachability of their tutor and this result generated the need to ask questions, such as "Why do you feel that audio or written feedback better promotes the approachability of your tutor?" with emphasis later emplaced on "*Why* do you think this?" as a way to explore in-

depth student opinions and achieve a more holistic understanding of the issue. Similarly, questions were also developed to provide a student perspective upon quantitative results gathered from the analysis of feedback scripts presented in Chapters Four and Five. For example, the content analysis of feedback scripts (see Chapter 4) found that audio feedback provided students with greater depth of explanation when compared to written feedback given for the same assignment. This resulted in the need to ask students questions, such as "What is your opinion on the amount of detail provided by your tutor in your audio feedback comments?" with emphasis again added on "*Why* do you think this?" to obtain a richness of information concerning student voice. Complete copies of the semi-structured interview schedule used for both modules are provided in Appendix X and Y.

The interviews were all conducted in the qualitative research lab in the Psychology Department at Aberystwyth University. This location held up-to-date recording equipment and was easily accessible to the students partaking in the research as it was within their own academic department. Interviews were conducted by the researcher at a time negotiated via email with the student. At the start of the interview, students were provided with an information sheet and if they agreed to participate with this information, were asked to sign their consent (see Appendix Z). Participants were informed of their right to stop the interview at any time and were provided with both researchers' contact details if they wished to withdraw their data from the study at a later date. During the interviews, the development of rapport between the interviewer and the interviewee was given high importance so to improve the calibre of the research. For example, rapport development may help the participant to feel at ease when discussing personal topics e.g. their emotional responses to their feedback and assignment grade. Following the advice of Bryman (2016), rapport development was achieved via visual cues of friendliness, such as smiling and maintaining good eye-contact. After the interview, participant names were removed from transcripts and replaced with a code (e.g. P01DB), which stated the participants allocated number and module abbreviation (e.g. DB = 'Drugs and Behaviour' Module), to ensure confidentiality. All interviews were audio recorded with the participants consent, transcribed verbatim, and stored securely within password protected files for analysis.

7.3.4 Data Analysis

As discussed, the interview schedule was developed with questions structured around Yang & Carless' (2013) Three Factor Framework for Dialogic Feedback. This framework was

selected on the basis of its existing application and ability to measure the extent of dialogic feedback fostered within a discipline. Components of this framework provided overarching themes of enquiry including:

- Cognitive Dimension: *Quality of feedback content provided to students and its impact on a student's ability to actively become a self-regulative learner*.
- Social-affective Dimension: *The social and relational impact of feedback, whereby emotional responses may impact a student's ability to self-regulate their own learning*.
- Structural Dimension: *Issues of students' satisfaction concerning resources for providing feedback.*

Thematic analysis was used to analyse the interview data. The choice of thematic analysis for this study lies in its suitability to a pragmatic framework and its provision of rich data sets that allow for clear interpretation of data (Braun & Clark, 2006). The thematic analysis used both inductive and deductive methods so to both capture the students' opinions and align these views within Yang & Carless' (2013) Three Factor Framework for Dialogic Feedback. An inductive method guides a data driven approach in which the participants' experiences are represented (Braun and Clarke, 2006). This semantic level of analysis was used as it was necessary to capture students own interpretation of receiving audio feedback. As such, the inductive method guided the initial phases of the analysis, whereby the codes were generated to reflect on the participants' experiences. The deductive approach guided the latter phases of the analysis as the themes were organized into the constructs of Yang and Carless' (2013) Three Factor Framework for Dialogic Feedback.

Each interview was audio recorded, transcribed verbatim and coded using Braun and Clarke's (2006) coding procedure. This involved a six-phase guidance to analysis:

1. Familiarization with data through transcription, numerous readings and taking notes.
2. Inductively generating initial codes from descriptions that were of importance to participants. This process involved some interpretation by the researcher to represent any experiences that students had struggled to articulate. Practically, this was conducted manually using the 'commenting' tool on Microsoft Word. All comments were assigned a page number and the allocated transcript number, so that the initial code could be traced back to the original quote.

3. Searching for potential themes, whereby any initial codes were arranged by similarity and organised into themes. Again, this process was conducted manually via printing off all annotated transcripts and cutting out the initial codes. These initial codes were then organised for similarity and potential themes emerged.
4. Reviewing themes, which involved refining 'potential themes' from the previous phase. This process was achieved by importing all quotes from the transcripts and emplacing them under their resulting potential theme in Microsoft Excel. This allowed for a holistic understanding of the potential themes generated and enabled a refining these themes to ensure all quotes adequately represented the theme they were located in.
5. Defining and naming themes, where analysis is organized into a narrative structure with accompanying descriptions on Microsoft Excel. These themes are examined in their own right, as well as in relation to each other. At this deductive stage, the themes were mapped onto Yang and Carless' (2013) Three Factor Framework for Dialogic Feedback.
6. Each of the model's constructs contained supportive or contradictory themes, which enabled discussion of the ability of audio feedback to foster dialogic feedback.
7. Producing the narrative findings.

7.4 Findings

7.4.1 Overarching Themes

Nine sub-themes were extracted from the data and mapped on to Yang and Carless' (2013) Framework for Dialogic Feedback. The "Cognitive Dimension" sub-themes describe how the provision of audio feedback enabled students to better obtain meaning from their tutor's comments and helped them to actively use their feedback to improve in the future (see Figure 7.1). Sub-themes residing within the "Social-Affective Dimension" outline how students felt audio feedback was more collaborative and encouraged positive emotions (see Figure 7.2). The sub-themes included in the "Structural Dimension" describe students' preferences concerning the timing, sequencing and usefulness of dual-modal feedback (see Figure 7.3).

7.4.2 Cognitive Dimension Sub-Themes

When outlining the cognitive dimension, Yang and Carless (2013) refer to the quality of feedback content provided to students and the impact this has on a student's ability to actively adopt deep approaches to learning. In the context of the present study, participants' descriptions of how they use and engaged with their audio feedback are presented. These experiences are organised into three sub-themes that are presented visually in Figure 7.1, which include increased comprehensibility, enhanced ability to gain meaning, and the encouragement of students' active participation through receiving audio feedback.

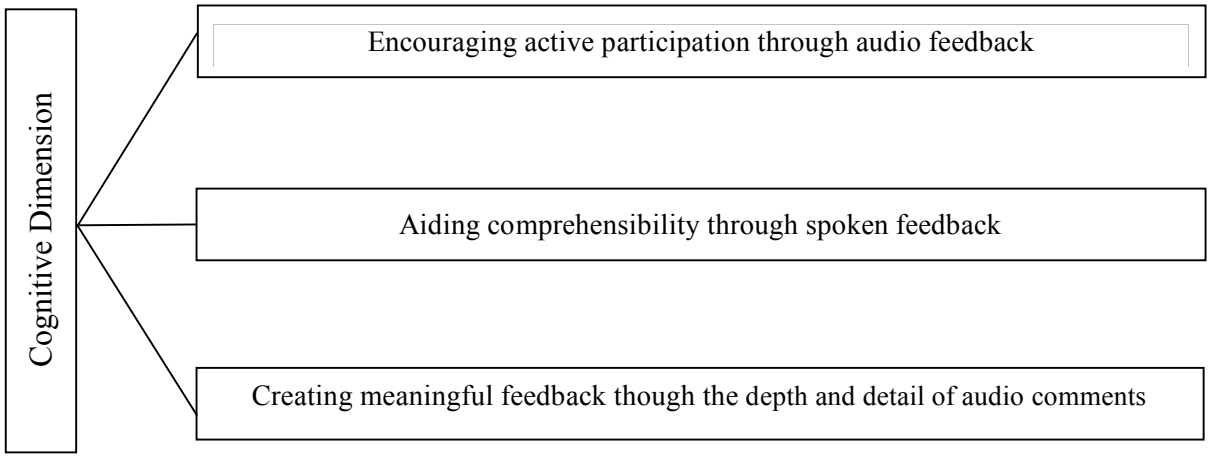

Figure 7.1 Illustration of sub-themes residing within the Cognitive Dimension

7.4.2.1 Encouraging Active Participation Through Audio Feedback

Students expressed in varying ways how receiving audio feedback was engaging and encouraged them to have an active role in using, processing and reflecting upon their feedback to both better understand their current assignment and to feedforward their feedback to improve on future assignments. This active use of audio feedback was often positively compared to a passive use of written feedback.

Considering this, all students (n=8) expressed that they found it beneficial on receiving their audio feedback to listen to the recording more than once. For example:

> "Three four times? Um it was nice because you can always go back and look over it (.) obviously, it's not going to change. Um but you can pause and you can check your point and you can go along with it, if you know what I mean. As if its step by step on the outlook of your essay...Um one was listening to sort of general sort of feedback so this bit was good this bit was bad and then the next few times it was I wanted to know

(.) I wanted to listen a bit closer to look at where exactly I had gone wrong and which bits were specifically liked" [P04F]

Of those students, more than half (n=5) outlined how they found it useful to listen to the audio recording while proactively looking though their essay. For example:

"I listened to it alongside my essay so I could hear it side by side... (.) yeah it made me go through (.) it made me actually look at my essay properly so it's not like 'it's finished now I don't need to look at it again' it was (.) I went through each and I thought okay actually 'this bit could be changed' and 'oh this bit could have been a little bit different' and that could have improved my mark." [P04F]

The remaining students (n=3) indicated that they found it useful to take notes from their audio feedback. For example:

"Um again, I don't know why but because it was like talking I wanted to write it down, so it kind of like stuck in my head a little bit more." [P07DB]

This student later expanded upon this, stating how this differed from her use of written feedback:

"I just wrote like little bullet points on how (.) like what I did well and obviously like what I got in the discussion and points to improve on. So, I just knew then what I (.) what to do next time…Like with written feedback, I know it sounds like really bad but I don't think I have ever even wrote it out, like even points like wrote out. I genuinely do think (.) wish that all of my modules did audio feedback to be honest." [P07DB]

Generally, students (n=5) also expressed the ease of re-visiting their audio feedback before completing a future assignment. For example:

"When I came to do my essay like my discussions again, was every three weeks I think it was, then I would listen to them again before starting that piece just to like refresh and I think it's just really like easy to click and just listen so yeah three or four

> times....Yeah, really useful. Like even though I'd written it down, it was nice to just have a bit of a (.) like you know I had wrote it out it was nice to listen to the feedback and what I can do to make it better." [P07DB]

Some students (n=3) indicated that their likelihood of re-visiting their audio recording before completing a future assignment rested on the more engaging nature of spoken feedback. For example:

> "I find it easier to remember as well. Cause there is someone talking to you rather than just you just reading it and then it gets lost in all the information you have read then about your assignment as well…Yeah cause [/because/] I tend to just read it [written feedback] once and then forget about it (.) well not forget about it forget about it but I'd forget like little details (.) so like in the audio one I'd remember like little bits too because someone was saying it but with the comments then I'd just forget like certain bits because I wouldn't tend to go back and read over them because it's so many comments just floating about". [P06F]

7.4.2.2 Creating Meaningful Feedback Though the Depth and Detail of Audio Comments

Students believed that audio feedback provided them with more depth of feedback, perhaps related to tutors increased flexibility to discuss specific strategies for solving problems, rather than just generally stating what the problems were. This depth of explanation found in audio feedback was often positively compared to the short and general comments said to appear within written feedback.

Specifically, all students (n=8) expressed that they felt their audio feedback included more depth of explanation, especially in explaining the strategies for solving problems, rather than just pinpointing what was wrong. For example:

> "Yeah, cause generally they [tutors providing written feedback] just say 'be more critical' but they wouldn't say WHY [emphasis] and like HOW [emphasis]. Though with the audio one it was like explained to you…" [P06F]

Similarly, most students (n=7) commented on the brevity of written feedback. For example:

> "Sometimes you get an annotation with one word 'good' or 'well done' or you know 'keep this up' or whatever. With audio you sort of like go into the points more and you can sort of like elaborate more about WHY [emphasis] than sort of writing." [P08F]

Some students (n=3) went as far to suggest that tutors provide more detail in audio feedback due to the naturalness of speech. For example:

> "In a way because I think like when its written feedback and say someone said 'be more critical' because they are typing it which takes longer and much more time than just talking I think, they don't tend to explain how you can do that and especially not give you an example in your own paragraph because that takes longer and they have so many to do …I feel like when you are talking you want to make people understand you more so you go into depth about HOW [emphasis] to be critical or HOW [emphasis] to be more reflective or things like that." [P07DB]

> "I think that with the audio maybe you [the tutor] feel more motivated because you are almost talking to the (.) student so you might elaborate more on things um and points. You know it's not as concise as text because sometimes you get an annotation with one word 'good' or 'well done' or you know 'keep this up' or whatever. With audio you sort of like go into the points more and you can sort of like elaborate more about WHY [emphasis] than sort of writing [P08DB]

Some students (n=6) also illustrated how tutors elaborate with specific examples from their own essay and how they found this specificity useful for knowing how to improve. For example:

> "And it makes you think that you know you have spent the time looking at it and what you are saying is a genuine improvement I [emphasis] could make like it wasn't just you know 'it wasn't that good' it's you know 'well it was good HERE [emphasis] but HERE [emphasis] it could have been a little bit better'." [P04F]

Students (n=3) empress how including more depth of explanation helped them to be able to feed-forward their feedback to help them to improve on future assignments. For example:

> "Well I listened to it because it helped me with my writing style then. You said like 'you could improve like upon this' so I like (.) I'd change it then when I was writing then. I wouldn't make the same mistakes twice. But with the written comments I find I wouldn't go back to read over the comments again because they tend to say the same thing. It's like (.) it looks like an automatic response do you know what I mean? Like saying like very short snips they put in for the comments but with the audio one it like explains it (.) so like I'm not going to make the same mistakes again then when I actually come to write my assignment." [P06F]

7.4.2.3 Aiding Comprehensibility Through Spoken Feedback

Students believed that variations in tone and the naturalness of the approach gave them increased insight into what the tutor was attempting to convey within their feedback comments. This clarity of speech reportedly found in audio feedback was often positively compared to misconceptions which arise with written feedback.

To elaborate upon this, most students (n=6) reported that receiving audio feedback was easier for them to understand due to the naturalness of the language used. For example:

> "Yeah, I mean because its more conversational isn't it? Writing sometimes you do sort of like you write in a different manner to what you speak and I think sometimes when you're hearing someone talk its clearer in a way, it can be a bit more helpful and easier to understand exactly, rather than trying to connect the dots with text based comments." [P08DB]

> "I would [clears throat] I would say it was easier because it was just kind of more like talking (.) like a conversation as opposed to (.) maybe when you are writing you just kind of slip into a more formal mode of (.) you think oh feedback it's got to be really professional and formal and stuff but I suppose with the audio it was a lot more (.) laid back. It just was just more like a normal conversation." [P01F]

This ease in understanding was further elaborated by another student who discussed the reduction of academic language and jargon used in audio feedback:

> "you didn't say 'review this' no you did just talk like a normal person which was really nice and a lot more accessible. I know we are all doing degrees and you know it's supposed to be, quote un-quote, 'clever' but it's nice to just talk normally about your essay and just say 'you could do this better' ... I didn't have to study and look up words to understand what you just told me…it was like coming to talk to you as a person (.) cause [/because/] when you go to peoples offices they don't say oh um fun words [long pause]... It's like before they were just putting in the jargon as just generic stuff whereas with you it was it was just 'this is what I think'. It was nice and just so much easier to understand." [P05F]

As well as the naturalness of language used in audio feedback, some students (n=4) also recognized the tone of voice as conveying further clarity and understanding. For example, one student illustrated how tone of voice conveys the relative importance of different feedback comments:

> "Um yeah because you could understand then like the 'this is the part where you really went wrong' and this is (.) 'but this is how you could improve it'. Like the tone kind of told you like this is worse than this bit and but this is how you can improve on it. But like the comments [written feedback] you get like it all just sounds as bad. If you get me. And it doesn't say how to improve it then so." [P06F]

7.4.2.4 Summary of Cognitive Dimension Sub-Themes

The experiences reported by participants within the cognitive dimension sub-themes overarchingly suggest students are better able to understand comments provided via audio feedback, as they were expressed 'naturally' through speech and provided greater detail. Interestingly, this increase in clarity of feedback was related by students to an increase in its feedforward potential (Carless, 2006), as they often suggested that they would be more likely to listen to their audio feedback again before completing a future assignment. As such, these results may go some way to align with the first and second features of dialogic feedback outlined by Yang and Carless (2013, p.8), as audio feedback appears to stimulate student

engagement with disciplinary problems and encourage students to have an active role in using their feedback.

7.4.3 Social-Affective Dimension Sub-Themes

By the social-affective dimension, Yang and Carless (2013) impress the importance of understanding feedback as a social and relational process whereby the management of relationships represents a source of emotions, which may significantly impact a student's ability to self-regulate their own learning. In the current study, participants' descriptions of their emotional responses to their feedback are presented. These responses are organised into three sub-themes that are presented visually in Figure 7.2, which include feelings of tutor caring, positive emotions, and the encouragement of collaboration and dialogue when receiving audio feedback.

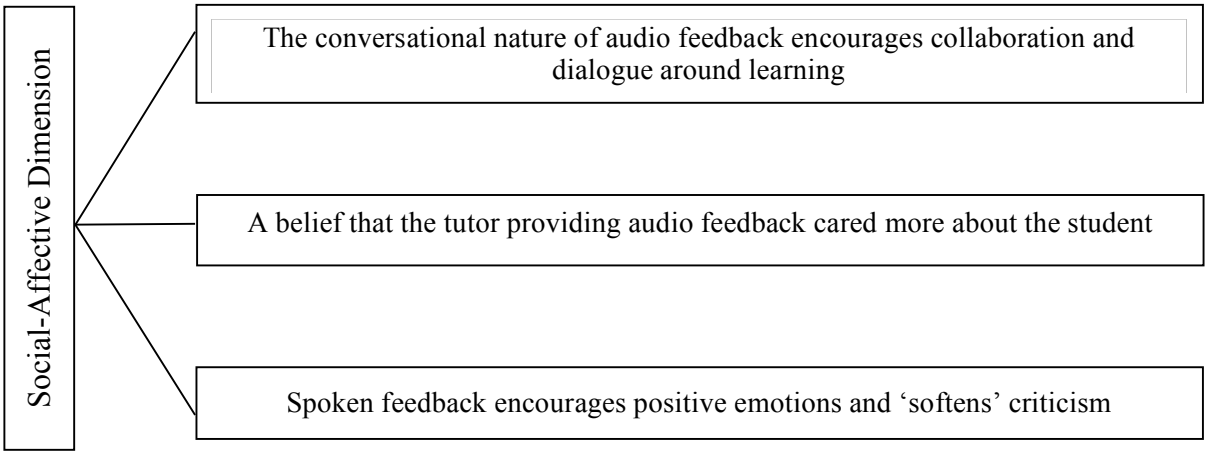

Figure 7.2 Illustration of sub-themes residing within the Social-Affective Dimension

7.4.3.1 The Conversational Nature of Audio Feedback Encourages Collaboration and Dialogue Around Learning

Students likened the spoken modality of audio feedback as being conversational and collaborative in nature; often outlining its similarities to a face-to-face meeting with their tutor. Although students regularly began their discussions in general terms, subsequent probing revealed that this perception was usually related to an increase in confidence to visit their tutor for face-to-face feedback.

Considering this, all students (n=8) discussed audio feedback as being like a conversation with their tutor. For example:

> "It's almost like when you go to your tutor and talk to them. You are not expecting them to slip a piece of paper to you, it's a real conversation and you kind of want to emulate that sort of pro-activeness in the audio feedback. Audio it does definitely work because you expect to talk to your tutor, you feel like it's a conversation". [P04F]

Interestingly, one student openly discussed this as a lessening of social distance between themselves and their tutor:

> "It was sort of (.) it was in a tone that was less sort of "I am your lecturer I am marking this" and more as if it was a formal conversation between colleagues which it sort-of bridged the gap between lecturer and student and made it feel as if it was two people talking at the same level rather than the feedback being dictated to a student." [P02F]

Some students (n=3) explicitly voiced how this conversational nature of audio feedback encouraged a more collaborative learning environment when receiving their feedback. For example:

> "Because you can hear the voice as well not kind of like a stale 'oh this is what happened basically' um its more 'what we can do together to make it better' it feels like it's more of a collaborative sort of learning process rather than 'oh you know this was quite bad figure it out for yourself' [laughs] which is sometimes how it feels." [P04F]

The majority of students (n=7) expressed how this conversational nature of audio feedback made them feel more comfortable to approach the tutor for further face-to-face feedback. For example:

> "It felt …more social in the sense that it wasn't just a 'oh here is a sheet of paper with your feedback on it' its felt like more of a discussion in the sense that I felt more open to be able to come and talk to you about it if I had have had anything that I didn't understand?" [P03F]

When asked this student elaborated on this further:

> "Audio I feel like is a lot easier to be able to (.) that of there was something within it that I didn't understand that (.) that maybe I had already talked to you through the feedback (.) if that makes sense. So, it felt like I wasn't just going and being like 'oh this is my essay and I'm confused at this bit' it felt like (.) it felt like you were more approachable because I had already listened to the feedback...Yeah, rather than beginning an entirely new conversation it felt like fitting back in a conversation that had already been had, even though it hadn't." [P03F]

7.4.3.2 A Belief that the Tutor Providing Audio Feedback Cared More About the Students Learning

Students expressed in varying ways that they felt the tutor cared more about their learning when receiving audio rather than written feedback. In most instances, this perception was closely related to feelings that audio feedback was more tailored to the individual student, the ability to sense nuance of voice and the belief that the tutor had put more effort into providing audio feedback.

Specifically, most students (n=5) expressed that they could sense their tutors caring about their learning through nuance of voice. For example:

> "I would say that written feels a lot less caring because you can't hear the tutor actually speak to you but… the issue that you have with written feedback I think is that you can't tell how someone feels through reading text lot of the time. So therefore, you don't know whether something is coming across properly. I feel like a person's criticisms could come from a caring like point of view but might not come across like that in writing...but in audio because the tone of voice and like how things are structured I feel like it comes across as more caring." [P03F]

> "The written comments …are quite final and you read that. It's you read it and you are done. Whereas the audio feedback you can actually hear their voice and hear the way they are speaking about it and hearing that the tutor is just as passionate about

reviewing your work as you are about writing it (.) it makes it easier to listen to." [P02F]

More than half of the students (n=5) voiced the belief that the tutor had put more effort into providing audio feedback and as a consequence cared more about their learning. For example:

"Just the fact that that they have taken that time to speak and record audio feedback for use rather than just type a quick message and submitting it and the fact that the lecturer or tutor has sat down, reviewed the essay, and actually spoke about everything in the essay (.) I think it makes it easier to tell they care and that they have taken that time out of their busy schedule to sit down and focus on that." [P02F]

"It kind of made me feel like it was feedback on a more personal level so it was (.) because when you get written feedback its (.) they are quite short the answers, you kind of feel like it was in passing but if you are having to sit there and talk about it, it makes you feel as if you have really gone through it...and it makes you think that you know you have spent the time looking at it and what you are saying is a genuine improvement I could make." [P04F]

Most students (n=6) also expressed an understanding of tutor caring when discussing how the language used in audio feedback made them feel like the tutor wanted to directly help them to improve for future assignments. For example:

"Yeah it was definitely more informal because it said like um 'YOU [emphasis] did this well, YOU [emphasis] included this, if YOU [emphasis] wanted to make your grade higher YOU [emphasis] could do this' as opposed to like um probably just saying 'this ESSAY [emphasis] included this, this and this' it was more (.) it felt like more directed at me as opposed to just kind of general feedback if that makes sense ... It was like helping ME [emphasis] out as opposed to just like analysis an essay in a way." [P01F]

"I think the written feedback again its quite cold and its stated in a way that it's just work for the lecturer (.) its them reviewing literature (.) um whereas the audio

> feedback made it feel as if it was (.) this is their way of helping rather than they are just marking (.) they are trying to help you improve and it makes it a bit more personable and it makes it easier to review than the written feedback was." [P02F]

7.4.3.3 Spoken Feedback Encourages Positive Emotions and 'Softens' Criticism

Students expressed how the natural language and nuance of voice found in audio feedback made them feel positive about their work and more motivated to improve on future assignments. This was often expressed positively compared to written feedback which was portrayed as either negative or lacking in emotion.

To elaborate, students (n=6) often discussed how the tutors tone of voice conveyed in the audio feedback fostered positive emotions and softened the negative impact of criticisms:

> "When you have someone being positive about your work you want to do better next time um and even like the say like the negatives because it was being spoken (.) say in one of my discussions I basically I messed up some of the citations um even though yeah that was a negative and that was you know it needs to be not done like that next time because it was being like spoken it didn't feel like proper like a proper getting at it was just like 'oh okay my citations are wrong but it's okay next time I can do it like this so'." [P07DB]

This student goes on to discuss this with an example of written feedback they received and how receiving this comment using the audio modality could have reduced the negative impact this caused:

> "Because you could hear the persons voice it didn't come across, like when they were saying about the develop points like, it didn't come across as harsh like the other one in semester one when it was just 'you can do better' just written [feedback]. Like maybe if someone had said that it might have been a bit more nicer." [P07DB]

Some students (n=4) highlight how the natural language used in audio recording motivated students and arose positive emotional responses to their feedback. For example:

> "They were [cross talk] constructive in um (.) it was more about 'YOU [emphasis] wouldn't have put certain things' (.) 'YOU [emphasis] wouldn't have emphasized so much on certain points' or 'I WOULD [emphasis] have talked about blablabla rather than' if that makes sense. It felt (.) instead of 'oh my god that's a really terrible paragraph' it was (.) I felt as if I could actually do something with it." [P03F]

> "Written feedback is so formal that they do put in a few positives but then because its formal it doesn't feel like they are being that positive. But then with the audio because you are being like 'ah well done for this' or 'I REALLY LIKED [emphasis] how you did this' I felt that it was more positive in the audio than I get in written because its more formal." [P07DB]

One student discusses the interaction between tone of voice and the use of natural language:

> "I probably will listen to it again when I do another assignment that is quite similar because it's very (.) personal in a way that's not…quite cold towards you… Writing is often quite stoic and cold and this is this and this is that. Rather than, okay 'this is why YOU [emphasis] have done really well, this is how YOU [emphasis] could improve'. It makes it easier to receive ...Um in a way that means that you don't get offended, when you can hear the actual tone of the voice rather than stock sentences." [P02F]

7.4.3.4 Summary of Social-Affective Sub-Themes

The experiences described by participants with the social-affective dimension sub-themes primarily suggest the provision of spoken comments better support students to manage the negative emotional impact of their feedback and develops feelings of increased collaboration with their tutor around their learning process. As such, it is felt these results go some way to align with the third and fourth features of dialogic feedback outlined by Yang and Carless (2013, p.8), as audio feedback appears to allow tutors to show sensitivity to students' emotional responses and nurtures collaborative teacher-student teacher relationships.

7.4.4 Structural Dimension Sub-Themes

In the structural dimension, Yang and Carless (2013) refer to the tutor's use of resources for providing feedback, which includes student satisfaction concerning the timing, sequencing and modes of feedback. In the context of the present study, participants' descriptions of how they prefer to receive their feedback are outlined. These experiences are organised into three sub-themes that are presented visually in Figure 7.3, which include the use of dual-modal feedback, applicability to assignment types, and issue of feedback length.

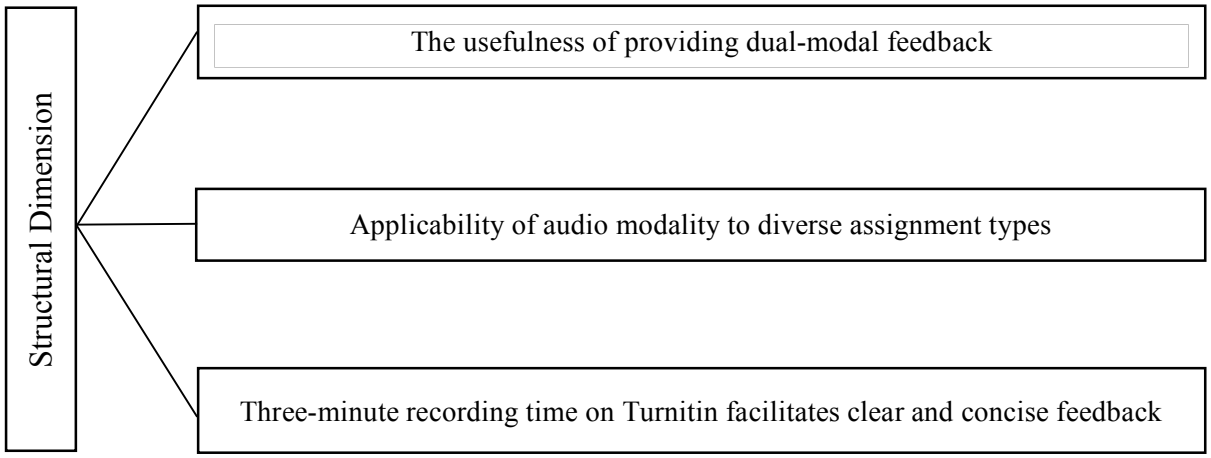

Figure 7.3 Illustration of the sub-themes residing within the Structural Dimension

7.4.4.1 The Usefulness of Providing Dual-Modal Feedback

Students believed that audio feedback was at its most useful when provided alongside in-text written comments, whereby the tutor may pinpoint an issue in the student's assignment using in-text written feedback and provide further elaboration upon this comment within the audio recording. Students pressed this basic method of providing dual-modal feedback aided in their ability to understand the message the tutor was aiming to convey concerning their assignment.

Considering this, the majority of students (n=7) expressed their preference for the use of in-text written comments to support elements discussed in the audio commentary. For example:

> "I think that towards the end there was audio feedback and text based so sometimes there was a comment saying 'this is a good point blablabla' and then like you would elaborate more in the audio and it would tell you more constructively what to do or

what you have done well. So yeah I feel the combination of those two things was really helpful." [P08DB]

This student later elaborated, outlining written feedback as a reference point for the audio feedback:

"It's always good to have the sort of little annotation as well to go with the audio feedback so it can direct you to where that point is basically...like a reference point." [P08DB]

It has been suggested by some students (n=4) that this dual-modal use of feedback aided in their ability to understand the message the tutor was aiming to convey. For example:

"With the little bubbles [in-text written comments] you can't always tell where they [the tutor] are coming from but when you listen to the recording then as well it like, with reference to the bubbles then, you can tell like where they are coming from…like comparing what the audio said then to the comments and it helps to understand them then." [P06F]

One student compared the dual-modal combination of receiving written in-text comments and audio feedback as being similar in usefulness to visiting their tutor face-to-face for feedback. For example:

"You went through it and then um like did your written feedback and then when through it as an audio and then talk about the essay then like pick out like the bits you have already highlighted and then just talk about them a bit more and again just chronologically then you have them together then. It's like going to your office and pulling up the essay and being like 'this is what I have done, this is what I have done, this is what I have done, this is why I said this'. So, you can see like a few words in the written comments like '*good evaluative point*' and then your audio could be like 'this was good because of this and this is where you could have taken it If you wanted to do even better' which I think is useful." [P05F]

> "I think combining them both is really really good…I can listen to you and read my essay and then you said I did this and then you highlighted that in my essay (.) there was like notes on like 'this is good' or whatever and it was good to have them both paired together....Yeah that was nice because (.) if you go (.) if I came to = [tutor] = in your office hours you'd have done exactly that but then I couldn't listen to it again because as soon as I walk out that office I'd have forgotten everything you'd have said. It's really good to be able to play that back over and over until you really have absorbed what's been said about it." [P05F]

7.4.4.2 Applicability of the Audio Modality to diverse Assignment Types

Students believed that audio feedback was at its most useful when utilized on assignments of smaller calibre and oral presentations. Some students also discussed the potential issues in applying audio feedback to longer assignments, such as third year dissertations, due to ease of access and restrictions in length of recording set by Turnitin Grademark©.

Specifically, one student expressed their opinion of audio feedback being flexible in its applicability to diverse types of assignments. For example:

> "I think it could be applied to all of them to be honest, because it's almost like when you go to your tutor and talk to them you are not expecting them to slip a piece of paper to you it's a real conversation and you kind of want to emulate that sort of pro-activeness in the audio feedback. Audio it does definitely work because you expect to talk to your tutor, you feel like it's a conversation." [P04F]

However, some students (n=4) conveyed a preference for audio feedback to be given on oral presentations. This is best exhibited by one student who said:

> "But things for like group presentations and stuff you know that would be good because you could talk about seeing it as like a social purpose so you can give me like a social element back instead of just something written. Because written feedback makes a bit of sense for essays and stuff but definitely for presentations and stuff that's nice because we have had to get up and say stuff so you can say stuff too." [P05F]

Other students (n=5) explicitly reinstated a preference for audio feedback on essay based assignments. For example:

> "I think it's definitely more suited to like presentations and essays that are more focused on discussing issues and evaluating issues …When you are discussing different issues in an essay that is more about like the evaluation of the theories and things like that I think audio feedback would definitely be more helpful for that and for presentations." [P02F]

Some students (n=2) noted a potential issue with the applicability of audio feedback to longer assignments due to the three-minute time restraint implemented by Turnitin. For example:

> "Longer essays such as a dissertation or I don't know longer essays in general, I feel like maybe the three-minute limit Is going to limit the amount of feedback that you get quite considerably so." [P03F]

Issues with the ease of access, concerning extending the length of audio feedback to discuss a dissertation, was also outlined by another student:

> "I guess than a long dissertation because you can't really. Because of it were a dissertation you would need a ten minute long worth of audio and going though that and trying to like find all the bits that the comments relate to might be harder than a smaller piece of work or presentation." [P08DB]

7.4.4.3 Three Minute Recording Time on Turnitin Grademark© Facilitates Clear and Concise Feedback

Students expressed positively that the three-minute maximum recording time provided on Turnitin Grademark© ensures that the tutor provides clear feedback. This clarity is thought to arise due to a need for tutors to provide elaborative yet concise feedback comments in response to the student's assignment. Some students recommend extending this allowed recording time, yet suggested this may hinder the overall clarity of the feedback.

To elaborate, the majority of the students (n=6) discussed the three-minute length of audio feedback on Turnitin Grademark© positively, in that it ensured their comments were clear and concise. For example:

> "I think three minutes can be you know quite concise enough and also give you enough information on what you need to know basically." [P08DB]

> "I quite liked it because as I said it was quite clear and strait to the point and there wasn't really uming and awing about (.) but I can also like if I was having issues with the feedback or whatever it felt like it would be easier to come and speak to you personally after having that. If that makes sense. Because I don't feel like it should be any more than three minutes." [P03F]

Some students (n=5) also expressed that this conciseness of audio feedback did not hinder the elaborative nature of the feedback comments. For example:

> "I really liked it. I think three minutes was just like perfect timing because I think in three minutes like it allowed them um person marking your work to um say all the stuff (.) develop the points, stuff like that um and it wasn't like too long so you were just sitting there like "oh god please shut up" it wasn't like that at all. Um no actually I think it was like perfect amount." [P07DB]

However, some students (n=3) indicated they might prefer the time their tutor can record audio feedback to be extended. Nonetheless, while this view was expressed these students also indicated that this extension in time is not a necessity and may in-fact detract from the concise yet elaborative nature of the audio modality. For example:

> "Obviously more is better so you know if you could have more time say 5 minutes I think that would be a good amount but maybe listening for 5 minutes every time you want to (.) it might be too much so I quite like the (.) I think three minutes can be you know quite concise enough and also give you enough information on what you need to know basically." [P08DB]

7.4.4.4 Summary of Structural Dimension Sub-Themes

The experiences outlined by participants within the structural dimension sub-themes refer to issues of practicality when receiving audio feedback on Turnitin Grademark©. Students explained how they felt audio and written feedback may be best combined, with the use of in-text comments to highlight issues further elaborated upon in-depth within the voice comment. The three-minute recording time was also discussed with many students suggesting it facilitates clear and concise feedback, yet may be of limited application to longer assignments, such as third year dissertation projects. Perceptions outlined within this dimension correspond to the sixth feature of dialogic feedback outlined by Yang and Carless (2013, p.8), as audio feedback is perceived to mobilise new technologies for feedback provision to facilitate student uptake. However, some questions may be raised as to the extent to which the voice commenting feature on Turnitin Grademark© facilitates flexible feedback provision in application to diverse forms of assignments.

7.5 Discussion

This phase of the study aimed to further reveal and explain the experiences of students who received audio feedback on their assignments by using Yang and Carless' (2013) Three Factor Framework for Dialogic Feedback. This model provided a useful framework to position the nine identified subthemes, which in turn provided support for the dialogic potential of audio feedback. These findings are summarized below, in relation to each of the three dimensions of dialogic feedback. Notably, this discussion will not integrate these findings with those quantitative findings reported in earlier chapters, such an inclusive discussion will be provided in Chapter Eight of this thesis.

The students' descriptions of their active use of audio feedback in the cognitive dimension highlights the ways in which they are encouraged to actively engage and become a self-regulative learner when receiving tutor comments through this technological medium. Specifically, all sub-themes within this overarching theme, implied that receiving audio feedback better enabled students to close the gap between current and desired performance (Nicol & Macfarlane-Dick, 2006). Interestingly, students often negatively described written in-text comments provided on Turnitin Grademark© as being too brief, short, and loaded with academic jargon to be useful for improving their future work. In contrast, students often reported feeling as though they could better comprehend audio comments, as they were expressed 'naturally' through speech and provided greater detail. Specifically, participants

often referred to the tone of voice, a reduction in academic jargon, and the ability of the tutor to provide further depth of explanation concerning 'how' and 'why' to improve, as factors that enabled them to actively engage and productively use their feedback. Specifically, the link may be made between the enhanced clarity provided in audio feedback and its feedforward potential (Carless, 2006), as students often suggested that these factors encouraged them to listen to their audio feedback again before completing a future assignment. This would be consistent with findings reported in the wider literature, concerning perceptions of the enhanced quality of audio feedback (Merry & Orsmond, 2008; Nortcliffe & Middleton, 2011; Roberts, 2008; Rotherham, 2008) and its ability to better engage students in the feedback process (McGarvey & Haxton, 2011).

Sub-themes residing within the social-affective dimension were found to be important to help students manage the emotional impact of feedback and encourage further positive student and tutor collaboration around learning. Specifically, participants made statements about their experiences of listening to their tutor speaking their feedback, suggesting this felt more akin to a face-to-face conversation with their tutor regarding their assignment. References were made to the conversational nature of the feedback as feeling less formal and encouraging feelings of the feedback process as a collaborative endeavour arising between the student and the tutor. Interestingly, some students suggested this more conversational style of feedback would encourage them to approach their tutor for further feedback dialogue, as the spoken modality encouraged feelings that the tutor had already initiated the feedback discussion. This result holds importance as research in face-to-face settings often confirms that teacher-student dialogue is more effective than other forms of interaction in educational settings, including discussing feedback with a peer (Nicol, 2010). The approachability of the tutor may also be encouraged when considering student descriptions concerning beliefs of tutor caring and the use of voice to 'soften' the unproductive negative impact of criticism. Participants often contrasted such descriptions with ideas surrounding the 'cold', 'blunt', and 'stoic' nature of written feedback, which made feedback harder to receive emotionally. Such expressions extend upon those reported in the wider literature that suggests audio feedback is a less superficial form of communication (Nortcliffe & Middleton, 2011), which encourages student perceptions of the tutor both caring about their work (Merry & Orsmond, 2008) and about them (Ice, Curtis, Phillips, & Wells, 2007). As such, future studies may benefit from testing empirically the likelihood of students to approach their tutor when receiving audio, compared to written, feedback.

Regarding the final component in Yang and Carless' (2013) three factor framework, the structural dimension, students discussed their perceptions concerning the timing, sequencing and modes of feedback. Participants described the clarity that providing asynchronous audio feedback may afford, as it enables the issue discussed by the tutor in the audio file to be pinpointed in their essay using an in-text 'Quick-Mark' on Turnitin Grademark© (Turnitin, 2018b). As such, participants' descriptions of their experiences within this overarching theme, may provide further understanding to the general want noted in the literature (e.g. Rockinson-Szapkiw, 2012) on behalf of students for a *blended* approach to receiving audio feedback. The recommendations concerning the practicalities in use of audio feedback by students continue, as participants suggested the wide applicability of audio feedback to both oral and essay type assignments, while noting potential issues with longer dissertation type assignments due to the three-minute recording limit imposed by Turnitin Grademark©. Findings which are not dissimilar to those found by Chiang (2009), when implementing audio feedback via emailed MP3 recording. However, when the topic of recording length was continued, students described the three-minute limit imposed by this virtual learning platform as beneficial to the creation of concise and clear audio feedback; often describing how if the recording was longer they may have disengaged and been discouraged from listening to their audio feedback again. Such descriptions align with conclusions drawn in the wider feedback literature (Race, 2005; Sadler, 2010), which suggest that *more* feedback is not necessarily *better* feedback, as it can cause confusion on behalf of students. Future research may benefit from investigating tutor perceptions of the issues noted above, so to understand whether complications may arise when providing feedback using the audio modality available on Turnitin Grademark©.

This qualitative phase of the study has sought to further reveal the *experiences* of students when given audio as opposed to written feedback on their assignment. Overall, when positioned within the three-factor framework for dialogic feedback outlined by Yang and Carless (2013), students strongly expressed the dialogic potential of the feedback provided using audio recording technology. Such an understanding may be reached when taking into consideration the applicability of student descriptions to the six features of effective dialogic feedback outlined by Yang and Carless (2013) in their central theoretical framework.

7.6 Conclusion

This chapter presented the qualitative findings of phase two of the study. Data were collected through semi-structured interviews with the aim to add depth and further explain the quantitative findings of this study by giving participants a voice about their experiences of receiving audio feedback in higher education. The data were analysed using a deductive thematic analysis based on Yang & Carless' (2013) Three Factor Framework for Dialogic Feedback. While the results of this phase of the study were briefly discussed within this chapter, the following chapter aims to provide a more complete and holistic interpretation of the data by integrating the results of all types of qualitative and quantitative data analysed within this study. Analysing the data in this way highlights the importance of both study phases in developing an understanding of the dialogic potential of providing audio feedback to students in higher education.

8 INTEGRATION OF DATA, DISCUSSION & CONCLUSION

8.1 Introduction

As the final chapter of the thesis, this chapter provides an integration of the entire data set for the study and concludes the research. The integration of data is an imperative stage of analysis when conducting a mixed method study as the combined outcome of the data has the potential to significantly add to the study outcome. In this study, data integration was informed by a comparison of the findings with Yang and Carless' (2013) Three-Factor Framework. The integration of data is presented in the form of three follow-up joint display tables, which form the basis of the discussion. A summary of the key integrated study findings is presented, alongside a general discussion of their application to the wider literature. This chapter also addresses the strengths and limitations of the study and the recommendations for research and practice. Finally, the chapter offers the opportunity to reflect upon the entire process of the study and provide an overall summary of the thesis.

8.2 Introducing Data Integration Using Yang & Carless' Dialogic Feedback Framework

Due to the literature critiquing the traditional method of written feedback (e.g. Agius and Wilkinson, 2014; Bevan et al., 2008; Bailey & Garner, 2010; Duncan, 2007; Weaver, 2006), this study aimed to explore how far providing feedback to students using audio technology may better serve as a facilitator of dialogic feedback in higher education. As identified in the literature review, there is clear argument for the need to focus attention on the *rapport* of feedback (Brown & Glover, 2006), to develop an understanding of feedback as a process of rich *dialogic* communication, rather than as a transmitted *monologic* event (Higgins, Hartley, & Skelton, 2001). This conceptual reframing of feedback practice concentrates on *how* feedback is *communicated*, by suggesting that for feedback to be effective it needs to be embedded in higher 'quality' forms of dialogue (Yakubinsky & Eskin, 1997 [1923]) which are thought to better facilitate a student's productive learning and the development of trusting student-tutor relationships (Yang & Carless, 2013). Considering this focus, the many critiques aimed at the traditional method of written feedback are interpreted as the result of employing only *monologic* modes of teacher-student communication (Nicol, 2010). Promisingly, as expressed by Yang and Carless (2013), this situation may be somewhat

mitigated by the use of innovative technologies, which could go some length to reinstate the dialogic context of feedback practice in higher education.

As discussed conceptually by Nicol (2010) and Yang and Carless (2013), the use of audio feedback may help to recreate a sufficiently dialogic and rich form of communication, incorporating paralinguistic features and nuance of voice, described by founding dialogic scholars (e.g. Voloshinov, 1973 [1929]) as necessary to the facilitation of effective disciplinary learning. However, despite such an encouraging conceptual hypothesis, few studies have directly assessed the potential of this technology grounded in pedagogic theory (Nortcliffe & Middleton, 2011). As such, the theoretical framework provided by Yang and Carless (2013) was used to inform this study. In taking a *dialogic* approach to a historically *transmission* focused issue, this study aims to extend and confirm what others have found, while providing a clear pedagogic rationale. Specifically, this theoretical framing is used to assess how far audio technology may help to facilitate effective dialogic feedback in the discipline.

When assessing the literature pertaining to audio feedback within the conceptual framework provided by Yang and Carless (2013), the need to capture a more *complete* and *holistic* understanding of the *experiences* of those students receiving this type of feedback arose. As such, both a comparative analysis of '*what*' feedback tutors provide to students on their assignment, together with an analysis of how students *themselves* feel they receive and interact with these comments were areas of interest in this study. In order to address these issues, a mixed method approach was chosen as the most appropriate to conduct the study, as the researcher believed the collection and analysis of qualitative and quantitative data would enrich the research outcomes (Creswell & Plano Clark, 2011). Specifically, the follow-up explanatory sequential design was employed, whereby the qualitative phase expanded on the quantitative results to provide a more holistic understanding of the outcome (Ivankova, Creswell, & Stick, 2006).

As highlighted by Creswell and Plano Clark (2011), it is important to consider the method of data analysis within sequential designs. They term this as "connected mixed methods data analysis" (p. 234). Specific strategies for connecting the data analysis include integrating the data gathered from the first quantitative data set to the planned second qualitative data set and ensuring the data analysis techniques in the qualitative data build on what was learnt from the quantitative data (Creswell and Plano Clark, 2011). In this case, the data analysis was informed by the research questions and the theoretical framework; Yang and Carless' (2013) Three-Factor Framework for Dialogic Feedback. To aid the reader, data

integration will also be presented in this section visually by using three "follow-up results joint display" tables (Creswell, 2015, p. 85), which align the main findings of the study to their appropriate dimension of dialogic feedback.

8.2.1 Integration of Data Organised Within the Cognitive Dimension

The features of dialogic feedback organized within the *cognitive dimension* of Yang and Carless' (2013) framework were initially explored quantitatively via the content analysis of feedback scripts and the student end of module surveys, and later qualitatively using semi-structured interviews with students. In terms of encouraging active engagement and use of feedback (see Table 8.1), the analysis of the survey findings showed a high percentage of students reported they listened to their audio feedback two to three times and that they would use it again when preparing for their next assignment. These results indicate high levels of student engagement with their audio feedback. This finding is consistent with results of previous studies, which document that in comparison to written feedback, students were ten times more likely to open their audio feedback (Lunt & Curran, 2010), and more likely to use their tutor's audio comments to feedforward onto their future work (Gleaves & Walker, 2013). Additionally, when interpreting such results in light of the qualitative findings gathered from the semi-structured interviews, a new understanding emerges. Students reported their need to listen to audio feedback multiple times arose from their want to make notes from the audio feedback or listen to the feedback alongside reading their graded assignment (see Table 8.1). Similarly, the ease of access was suggested by some participants as a reason for why they would be more likely to listen to their audio feedback again before completing a further assignment (see Table 8.1). As such, these results may go some way to align with the second feature of dialogic feedback noted by Yang and Carless (2013) in their central framework, as audio feedback appears to encourage students to have an "active role in generating, processing and using feedback" (p. 293), more so than the traditional method of written feedback.

A common theme reported when assessing the results from both stages of the study was the enhanced amount of detail and depth of feedback provided when using the audio technology. Analysis of the content of tutor comments showed that the tutor providing the audio feedback was much more likely to give feedback at a level higher than just acknowledging an issue, often by suggesting how to correct the issue and why this correction was needed (see Table 8.1). These results support the student perceptions reported in the

An Integration of Data as Organised within the Cognitive Dimension of Yang & Carless' (2013) Three-Factor Framework			
Yang & Carless' Dialogic Framework	QUANT Data		QUAL Data
	Content Analysis	Student Survey	Student Interviews
Active Use of Feedback	• No Data Available	• 76% of 'Forensic Psychology' students reported they listened to their feedback two (N=13) to three (N=6, M=2.36, SD=.86) times. • • 95.5% of 'Forensic Psychology' students reported they would listen to their audio feedback again when preparing for a future assignment (N=21, Mo=1, SD=.21).	• All (n=8) participants expressed they of listened more than once so to either write notes (n=3) or listen while reading through their essay (n=5): "…because it was like talking I wanted to write it down, so it kind of like stuck in my head a little bit more." [P07DB] "I listened to it alongside my essay so I could hear it side by side… it made me actually look at my essay properly so it's not like 'it's finished now I don't need to look at it again' it was (.) I went through each and I thought okay actually 'this bit could be changed'… and that could have improved my mark" [P04F] • 5 noted the ease of re-visiting their audio feedback: "When I came to do my essay…again,…then I would listen to them again before starting that piece just to like refresh and I think it's just really like easy to click and just listen" [P07DB]
Depth and Detail	• Written feedback provided was mostly at the level of acknowledging a problem (Level 1) while audio feedback often gave students more ways to correct the issue (Level 2) and an explanation of why this correction was needed (Level 3). • Audio feedback contained more discussion of disciplinary specific skills (e.g. critical analysis, 34%) than written feedback (22%).	• 84% participants 'Strongly Agreed' (N=9) or 'Agreed' (N=12, M=1.92, SD=.95) that their audio feedback was more detailed in its explanation of issues, than written feedback they have received in the past. • 76% 'Strongly Agreed'(N=8) or 'Agreed' (N=11, M=2.1, SD=1.12) that audio comments helped them to understand disciplinary specific terms (e.g. critical analysis), more so than written comments they have received in the past.	• All students (n=8) expressed that they felt their audio feedback included more depth: "Yeah, cause generally they [tutors providing written feedback] just say 'be more critical' but they wouldn't say 'WHY' [emphasis] and like 'HOW' [emphasis]. Though with the audio one it was like explained to you" • 3 students suggested: "I feel like when you are talking you want to make people understand you more so you go into depth about HOW [emphasis] to be critical" [P07DB]
Comprehensibility	• No Data Available	• Most participants 'Strongly Agreed'(N=9) or 'Agreed' (N=7, M=2.0, SD=.93) that audio comments were provided in a language that was easier to understand, than written comments. • 88% 'Strongly Agreed' (N=9) or 'Agreed' (N=13, M=1.8, SD=.97) that listening to the spoken feedback comments provided them with greater clarity, than reading the written comments. • Most students 'Strongly Agreed' (N=10) or 'Agreed' (N=9, M=2.0, SD=1.11) that the tutor's tone of voice in audio feedback added more explanation, than written comments.	• 6 out of 8 expressed audio was easier to understand due to the naturalness of the language and reduction in Jargon: "I think sometimes when you're hearing someone talk its clearer in a way" [P08DB] "You did just talk like a normal person which was really nice and a lot more accessible… It's like before [in written feedback] they were just putting in the jargon as just generic stuff, whereas with you it was it was just 'this is what I think'. It was nice and just so much easier to understand." [P05F] • Half of the students (n=4) also recognized the tone of voice as conveying further clarity and understanding: "You could understand then like the 'this is the part where you really went wrong' and this is (.) 'but this is how you could improve it'. Like the tone kind of told you like this is worse than this bit and but this is how you can improve on it. [P06F]

Table 8.1 An Integration of Data as Organised within the Cognitive Dimension of Yang & Carless' (2013) Three-Factor Framework

survey within phase one of this study (see Table 8.1), alongside the results of other research utilizing survey methodology in the wider literature (Roberts, 2008; Rotherham, 2008; Merry & Orsmond, 2008). In this study, the qualitative data regarding the depth and detail of tutor audio comments elaborates on the findings from the quantitative phase, as some students went so far to suggest that the spoken nature of audio feedback encouraged their tutors to provide more depth of explanation (see Table 8.1). Interestingly, this finding is also consistent with results of previous studies focusing upon the tutor perspective, whereby tutors have reported feeling as though they should provide more detailed feedback to students and were better able to do so when using audio feedback (Swan, Dagen, Matter, Rinehart & Ice, 2008). Laughton (2010) argues such a depth of explanation benefits students by providing a more communicative approach that 'unpacks' disciplinary specific terms and issues, which may then facilitate their ability to actively interpret key elements of their feedback. These findings support the potential of audio feedback to better facilitate quality tutor discussion of a technique, concept, or other aspect concerning the student's work; a feature which is intregal to the vision of dialogic feedback proposed by Yang and Carless (2013), due to its ability to better engage students with disciplinary concepts embedded in tutor discourse.

Enhanced clarity and comprehensibility of audio feedback were final facets of the data noted in both phases of the study, to be discussed within the cognitive dimension of Yang and Carless' (2013) framework for dialogic feedback. The analysis of the survey findings show a high percentage of students agreed that their audio feedback was reported in a language that was easier to understand and that the tutors tone of voice provided them with further clarity than written feedback may afford (see Table 8.1). This finding is consistent with results of previous studies, which document that students feel they understand material provided in audio format better, due to the confirmation of meaning that is conveyed through the immediacy, fluidity and nuance that speech provides (Ice, Curtis, Phillips and Wells, 2007). Additionally, when interpreting such results in relation to the qualitative findings gathered from the semi-structured interviews, consistencies emerge. As presented in Table 8.1, students felt audio feedback was easier to understand due to the naturalness of the spoken language, which included a reduction in academic jargon. Similarly, some students expressed how the tone of voice helped convey to them the varying importance of different elements of their tutor's feedback. These results heavily relate to the concept of 'cue-consciousness' (Boekaerts, 2010 as cited in Yang & Carless, 2013), which refers to a student's ability to identify signals in their tutor's discourse about what is important in the academic discipline, such as what is needed to achieve optimum results in the assessment process (Price, Handley,

& Millar, 2011). Often written feedback is thought to encourage students to be 'cue-deaf' (Yang & Carless, 2013), as it is too deeply encrypted, including formal language and academic terminology without a clarity in expression. The enhanced dialogic nature of audio feedback may be purposed when considering the potential of this medium to foster among students a sensitivity to cues, which is a central stage in the development of pedagogic literacy and self-regulatory skills (Yang & Carless, 2013).

8.2.2 Integration of Data Organised Within the Social-Affective Dimension

The features of dialogic feedback organized within the *social-affective dimension* of Yang and Carless' (2013) framework were initially explored quantitatively via the analysis of feedback scripts and the student end of module surveys, and later qualitatively using semi-structured interviews with students. In terms of encouraging collaboration in learning, the linguistic analysis findings (see Table 8.2) present audio feedback as including more active use of expository questions, that help to acknowledge the student as 'being' and form the interactional status of the feedback (Martin & White, 2005), together with more active use of plural pronouns (e.g. we), which serve the communicative function of reinforcing feedback as a process of collaboration between the student and the tutor (Helmbrecht, 2002; Martin & White, 2005; Scheibman, 2004). While further research is required to fully ascertain the impact of these linguistic devices on a student's perceptions of ownership and responsibility surrounding the improvements needing to be made to their work, the results of the other phases of this study go some way to suggest these devices may develop a more 'conversational' and 'informal' form of feedback that encourages students to feel comfortable to approach their tutor for face-to-face feedback. It may be suggested that students recognised this form of feedback when assessing the results of the student survey (see Table 8.2) in relation to previous literature. The results of this survey corresponded with the results of Ice, Curtis, Phillips, & Wells (2007), as a high proportion of students agreed that their audio feedback helped them to experience their tutor's presence in their learning. However, the results of this study go some way to further this finding by suggesting students perceive their tutor as more approachable after receiving audio, in comparison to written, feedback. By drawing upon the findings from the semi-structured interviews, a more holistic understanding of this result emerges. Students reported how they considered audio feedback as more of a conversation with their tutor, which facilitated feelings of feedback, and subsequent improvement, as more of a collaborative learning process occurring between themselves and

An Integration of Data as Organised within the Social-Affective Dimension of Yang & Carless' (2013) Three-Factor Framework				
Yang & Carless' Dialogic Framework	QUANT Data			QUAL Data
	Content Analysis	Linguistic Analysis	Student Survey	Student Interviews
Encouraging Collaboration	• No data available	• More active use of plural pronouns (e.g. We) in audio, which reinforces the collaborative nature of the feedback. • Use of expository questions in audio, which use interrogatives to acknowledge the student as 'being' and help form interactional status of the feedback. • More active use of language that was of an informal or colloquial nature in audio, which are features more akin to spoken face-to-face language.	• 96% 'Strongly Agreed' (N=15) or 'Agreed' (N=9, M=1.44, SD=.58) audio feels more personal than written feedback • 80% 'Strongly Agreed' (N=13) or 'Agreed' (N=7, M=1.68, SD=.80) audio helped them experience their tutor's presence, more so than written feedback • 96% 'Strongly Agreed' (N=13) or 'Agreed' (N=11, M=1.52, SD=.58) audio promoted the approachability of their tutor, more than written. • 84% 'Strongly Agreed' (N=12) or 'Agreed' (N=9, M=1.8, SD=.70) audio encouraged peer and tutor conversations about learning, more than written.	• All (n=8) students considered audio as more of a conversation that encourages collaboration: "Audio it does definitely work because you expect to talk to your tutor, you feel like it's a conversation". [P04F] "Because you can hear the voice as well not … a stale 'oh this is what happened basically'… its more 'what we can do together to make it better' it feels like it's more of a collaborative …learning process" [P04F] • 7 noted how the conversational nature also encouraged approachability of tutor: "…maybe I had already talked to you through the [audio] feedback…it felt like you were more approachable because I had already listened to the feedback…Yeah, rather than beginning an entirely new conversation it felt like fitting back in a conversation that had already been had, even though it hadn't." [P03F]
Tutor Caring	• No data available	• More active use of language aimed at appreciation of the student's work in audio, providing low social evaluation.	• 88% 'Strongly Agreed' (N=12) or 'Agreed' (N=10, M=1.76, SD=.96) that receiving audio feedback allowed them to sense caring on behalf of their tutor, more so than when receiving written feedback	• 5 out of 8 participants expressed how through nuance they could feel their tutor cared: "the audio feedback you can actually hear their voice and hear the way they are speaking about it and hearing that the tutor is just as passionate about reviewing your work as you are about writing it (.) it makes it easier to listen to." [P02F] • 5 expressed they felt the tutor cared more because they had put more effort into the feedback: "rather than just typing a quick message and submitting it and … the tutor has sat down, reviewed the essay, and actually spoke about everything…I think it makes it easier to tell they care and that they have taken that time out of their busy schedule to sit down and focus on that." [P02F]
'Softening' Criticism and Developing Positive Emotions	• The students received from both modalities a reasonably large amount of positive motivational feedback, this type of feedback incites positive motivational beliefs and increases self-esteem.	• More active use of hedging in audio, as mitigation to soften negative emotional impact of feedback on the student and maintain positive interpersonal relationship. • More active use of personal pronouns (e.g. I, You) in audio, which may also serve as mitigation to soften negative emotional impact of feedback.	• 72% 'Strongly Agreed' (N=7) or 'Agreed' (N=11, M=2.12, SD=.97) that audio feedback helped to motivate them and develop their self-esteem, more than written feedback.	• 6 out of 8 participants noted the nuance of voice as fostering motivation and positive emotion: "because it was being like spoken it didn't feel like proper like a proper getting at it was just like 'oh okay my citations are wrong but it's okay next time I can do it like this" [P07DB] "It [audio] makes it easier to receive …Um in a way that means that you don't get offended, when you can hear the actual tone of the voice rather than stock sentences." [P02F] • 4 participants directly suggest the natural language in audio effected their response: "They were constructive …it was more about YOU [emphasis] 'wouldn't have put certain things' …or 'I WOULD [emphasis] have talked about blablabla rather than' if that makes sense. It felt (.) instead of 'oh my god that's a really terrible paragraph' it was (.) I felt as if I could actually do something with it." [P03F]

Table 8.2 An Integration of Data as Organised within the Social Affective Dimension of Yang & Carless' (2013) Three-Factor Framework

the tutor (see Table 8.2). Extending this, some students also suggested that because the audio feedback felt more like a conversation they felt more comfortable approaching their tutor for further feedback, as they were only 're-opening' the feedback interaction initiated by the tutor within the audio recording (see Table 8.2). Relating these results to the theoretical frame for this study, Yang and Carless (2013) suggest it is how tutors position themselves in the discipline when interacting with students that is of key interest within the social affective dimension. Specifically, perceived unequal power relationships with tutors may cause students to feel socially distant and lose confidence in obtaining teacher feedback in face-to-face situations. As such, the results of this mixed method study may go some way to align with the third feature of dialogic feedback noted by Yang and Carless (2013) in their central framework, as audio feedback appears to encourage "collaborative … teacher-student relationships" (p.293), more so than the traditional method of written feedback.

A common theme reported when assessing the results from both stages of the study was the enhanced ability to soften criticism and encourage positive motivational beliefs when using audio recorded feedback. Although the content analysis findings suggest that both modalities provided a reasonable amount of direct forms of praise and motivational feedback, findings arising from the linguistic analysis suggests that audio feedback includes more mitigated forms of criticism (e.g. use of hedging and personal pronouns), which indirectly serve to soften negative emotional impact of feedback on the student (Austin, 2016). While further research may be required to fully ascertain the impact of mitigated criticism on a student's perceptions of the level of change required, the results of the other phases of this study go some way to suggest the positive motivational impact this has on the student to encourage then to improve their work for the future. This suggestion is consistent with results of the survey (see Table 8.2) and previous studies (Bond, 2009; Dagen, Mader, Rinehart, & Ice, 2008; Ice, Curtis, Phillips, & Wells, 2007), which found students reported that audio feedback better motivated them and developed their self-esteem. However, an interpretation of these findings in light of the semi-structured interviews, develops further clarification and understanding. As presented in Table 8.2, students often expressed how the natural language and nuance of voice found in audio feedback made them feel more optimistic about the criticism aimed at their work and more motivated to improve on future assignments. Such findings hold important implications when considering the issue purposed by Yang and Carless (2013), which stated that while it is difficult to achieve in practice, an appropriate balance is needed between support and critique in feedback so to maintain student confidence to improve. Here it is suggested that the spoken nature of audio feedback may aid tutors in

striking this balance, going some way to address the fourth feature of dialogic feedback noted by Yang and Carless (2013) in their central framework, as it appears to enable tutors to show "sensitivity to students' emotional responses and psychological needs" (p.293), more so than the traditional method of written feedback.

Perceived enhanced ability to sense caring on behalf of the tutor was the final facet of the data noted in both phases of the study and discussed within the social-affective dimension of Yang and Carless' (2013) framework. Analysis of the linguistic data suggested audio feedback included a slightly more active use of language aimed at developing an evaluation of the assessment, rather than of the student's behaviour (see Table 8.2), which serves the function of reducing the perceived level of social sanction issued by the academic (Nicol, 2010). Additional insight into such findings may be acquired by assessing the results of the student survey (see Table 8.2), whereby the majority of students agreed that receiving audio feedback allowed them to sense caring on behalf of their tutor, more so than when receiving written feedback. This finding is consistent with the results of previous studies, which document similar student perceptions that their tutors to both care more about their work, their learning (Merry & Orsmond, 2008) and about *them* (Ice, Curtis, Phillips, & Wells, 2007) when receiving audio feedback, as it is a "less superficial" (Sipple, 2007, p. 26) mode of communication that includes nuance and intonation of voice (Gleaves and Walker, 2013). Comparable conclusions may be drawn when considering the results of the student interviews from phase two of this study, as students often expressed feeling as though they could sense their tutor's passion though the tone of voice in the audio feedback, alongside beliefs that the tutor had taken more time and effort to produce feedback using this modality. Given this knowledge, it may be suggested that audio feedback may better encourage the third feature of dialogic feedback noted by Yang and Carless (2013) in their central framework, by developing positive and "trusting teacher-student relationships" (p.293), more so than the traditional method of written feedback.

8.2.3 Integration of Data Organised Within the Structural Dimension

The features of dialogic feedback organized within the *structural dimension* of Yang and Carless' (2013) framework were initially measured using quantitative data gathered from the student end of module surveys, and later investigated qualitatively in semi-structured interviews with students. In terms of student satisfaction with the modality of audio feedback (see Table 8.3), the analysis of the survey findings showed a high percentage of students

An Integration of Data as Organised within the Structural Dimension of Yang & Carless' (2013) Three-Factor Framework		
Yang & Carless' Dialogic Framework	QUANT Data	QUAL Data
	Student Survey	Student Interviews
Modality	• 68% students chose to receive audio, rather than written feedback on other modules in the future (N=17, Mo=1, SD=.47). • 76% students stated that audio feedback was improved by using the combination of audio and in-text comments (N=19, Mo=1, SD=.43).	• 7 out of the 8 participants reported the benefit of receiving blended audio and written feedback: "…it's always good to have the sort of little annotation as well to go with the audio feedback so it can direct you to where that point is basically...like a reference point" [P08DB] • Some students (n=4) suggested this aided their understanding: "…with reference to the bubbles then, you can tell like where they are coming from…like comparing what the audio said then to the comments and it helps to understand them then." [P06F] • One student compared this blended approach to face-to-face feedback: "I think combining them both is really really good… if I came to = [tutor] = in your office hours you'd have done exactly that but then I couldn't listen to it again because as soon as I walk out that office I'd have forgotten everything you'd have said" [P05F]
Length	• 76% of students reported their audio feedback was 'About the Right Length' (N=19, M=1.76, SD=.43). • However, nearly half of the students (N=12, Mo=2, SD=.51) reported that audio feedback could be improved by Turnitin Grademark allowing a longer recording time.	• 6 of the 8 participants discussed the three-minute length of audio feedback on Turnitin positively, in that it ensured their comments were clear and concise: "I think three minutes can be you know quite concise enough and also give you enough information on what you need to know basically." [P08DB] • Some participants (n=3) suggested the recording time could be extended but that this may detract from the concise yet elaborative nature of the audio modality: "5 minutes I think that would be a good amount but maybe listening for 5 minutes every time you want to (.) it might be too much so I quite like the (.) I think three minutes can be you know quite concise enough and also give you enough information on what you need to know basically." [P08DB]
Applicability	• No Data Available	• 5 out of the 8 participants expressed audio feedback was flexible for use on assignments of smaller calibre and oral presentations: "I think it's definitely more suited to like presentations and essays that are more focused on discussing issues and evaluating issues …" [P02F] • However, 2 of the 8 participants indicated potential issues applying audio feedback to longer assignments: "Longer essays such as a dissertation or I don't know longer essays in general, I feel like maybe the three-minute limit Is going to limit the amount of feedback that you get quite considerably so." [P03F]

Table 8.3 An Integration of Data Organised within the Structural Dimension of Yang & Carless' (2013) Three Factor Framework

reported they would like to receive audio feedback again in the future, especially if blended with written in-text 'Quick-Mark' comments on Turnitin Grademark (Turnitin, 2018b). This result is consistent with previous findings (Rockinson-Szapkiw, 2012), which suggest students prefer a blended approach to feedback provision, while holding a chief preference for the audio feedback. Furthermore, in the semi-structured interviews, students often reported that a blended approach to feedback was preferred as the tutor could pinpoint an issue in the student's assignment using an in-text written comment and provide further elaboration upon this in-text comment within the audio recording (see Table 8.3). Interestingly, one student suggested this to be more akin to a face-to-face feedback interaction with their tutor as the tutor could refer and elaborate on elements of their work, yet more flexible because they could re-listen to their feedback with ease (see Table 8.3). These findings are important when considering the issue purposed by Yang and Carless (2013), which stated that while face-to-face feedback may most flexibly accommodate student needs, due to the pressures faced by academic staff, such a form of interaction is not a feasible means of providing feedback to all students in the current higher education context. Here it is suggested that students' needs may be more flexibly accommodated when using a blended approach to feedback, going some way to address the fifth feature of dialogic feedback noted by Yang and Carless (2013), as it appears to flexibly utilise different technology enhanced forms of feedback to facilitate student uptake, more so than providing only the traditional method of written feedback. However, it must be noted that while this technology enhanced method may help to engineer a more flexible method of feedback delivery for some students, it may not for others. Hearing impaired students or second language English speaking students, may not be in such a beneficial situation when receiving audio over written feedback (Nicol, 2010). As such, more research is needed to further understand the potential implications audio feedback may have on different student populations.

Student perceptions concerning the length and subsequent applicability to diverse assignment types were the final facets of the data noted in both phases of the study and discussed within the structural dimension of Yang and Carless' (2013) framework. Analysis of the survey findings showed contradictory findings concerning student satisfaction with the length of the audio recording, which Turnitin Grademark© restricts to three minutes. While the majority of students reported their audio feedback was about the right length, some suggested the quality of the audio feedback could be improved by increasing its length. As noted in Chapter Six, this issue is hard to 'unpick' due to a lack of studies reporting the

length of the audio recording when provided using emailed MP3 files or embedded recordings on PDF documents (Chiang, 2009; Dixon, 2015). However, an interpretation of these findings in light of the data gathered from the semi-structured interviews develops further understanding of this issue in relation to the voice commenting tool on Turnitin Grademark©. Students often discussed the three-minute length of audio feedback on Turnitin positively, in that it ensured their comments were clear and concise. However, they expressed doubts as to the application of this length of feedback to larger assignments, such as dissertations, suggesting that even if the length of the recording were to be extended, the clarity and ease of listening to the tutors spoken comments may be lost (see Table 8.3). In consideration of these findings, it is suggested that audio feedback provided via Turnitin Grademark© only goes so far to facilitate the fifth feature of dialogic feedback noted by Yang and Carless (2013) in their central framework, as it is somewhat limited in its flexibility to be applied to different and more advanced forms of assignment tasks.

8.2.4 Summary of Integrated Study Findings

In Section 8.2, the study data were integrated and analysed within Yang and Carless' (2013) Three-Factor Framework. This section will provide a brief overview of the key integrated findings of the study organised in relation to the three dimensions which form the analytic framework. The results organised within the cognitive dimension of Yang and Carless' (2013) framework primarily concern the enhanced clarity and comprehensibility of audio feedback, which subsequently appeared to encourage students to actively use their feedback to improve for future assignments. Not only was this added depth and clarity of spoken comments suggested within the content analysis of feedback scripts (Chapter 4) and the student survey (Chapter 6), but also in the qualitative interview phase of the study (Chapter 7), as students often discussed audio feedback as including 'why' and 'how' to improve for future assignments, rather than just a brief acknowledgement of 'what' they have done wrong. In the interviews, many students linked the enhanced quality of content within audio feedback to their more active use of their tutor's comments. Specifically, students reported listening to their feedback more than once and a want to re-listen to their recording again when preparing for their next assignment. Discussing these findings in light of the Framework for Dialogic Feedback (Yang & Carless, 2013), it is suggested that audio feedback better facilitates the cognitive features of effective feedback, as students are

encouraged to engage with disciplinary concepts and have an active role in generating, processing and using feedback.

Organised within the social affective dimension of Yang and Carless' (2013) framework, the results of this study suggest the use of audio feedback allows tutors to soften the negative impact of criticism aimed at students and encourage perceptions of caring about their progress, which subsequently appeared to increase student confidence to approach their tutor for face-to-face feedback situations. First noted within the linguistic analysis of tutor feedback scripts (Chapter 5), audio feedback includes more mitigated forms of criticism that soften the negative emotional impact of feedback on the student (Austin, 2016). The results of the student survey provided a different perspective on this issue, as many students agreed that receiving audio feedback allowed them to better sense caring on behalf of their tutor about their *learning* and about *them*. In the interviews, some students suggested these features helped to create a more informal type of feedback, which made them feel more comfortable to approach their tutor for further face-to-face feedback. It is suggested these study findings may go some way to align with the social-affective features of dialogic feedback noted by Yang and Carless (2013) in their framework, as audio feedback appears to better allow tutors to show emotional sensitivity and develop collaborative teacher-student relationships.

Finally, organised within the structural dimension of Yang and Carless' (2013) framework, the results of this study suggest the feasibility of using Turnitin Grademark© as a platform for the delivery of audio feedback when used with smaller assignment types. Notably, within both the survey and the interviews students stated a preference for the use of blended audio and written feedback, which is most flexibly facilitated on Turnitin Grademark© via the use of 'Quick Marks' as a textual reference point to then be spoken around within the audio file (Turnitin, 2018b). While in the interviews students discussed asynchronous audio feedback positively as it facilitated a clear and concise form of feedback when used with smaller assignment types (e.g. essays or oral presentations), some students questioned the applicability of this form of feedback to longer assignment types (e.g. third year dissertation projects) due to the restricted three-minute recording time set on Turnitin Grademark©. In consideration, future research may consider the benefits of using other platforms to deliver audio feedback. Discussing these findings in relation to the framework, it may be suggested that audio feedback provided via Turnitin Grademark© only goes so far to facilitate the structural features of dialogic feedback noted by Yang and Carless (2013) in their central framework, as it is slightly limited in its flexibility when applied to more advanced forms of assignment tasks.

8.3 General Discussion using Yang & Carless' (2013) Dialogic Feedback Framework

Throughout this thesis, Yang and Carless' (2013) Three Factor Framework for Dialogic Feedback has been used as a lens through which to view the data and inform the study. The aim was to measure and explore how far providing feedback to students using the audio recording technology may better serve as a facilitator of dialogic feedback in higher education, than the traditional method of written feedback. The data from both phases of the study were compared with Yang and Carless' (2013) Framework to identify contingency between the reported findings and the theoretical framework. A number of Yang and Carless' (2013) features of effective dialogic feedback were present in the data, which supports the notion that the audio technology may help reinstate the dialogic content of feedback practice in higher education, more so than that of written feedback.

Yang and Carless' (2013) Framework indicates three key dimensions important for building and maintaining dialogic feedback in higher education. Within each of these three dimensions are two key factors or elements, which Yang and Carless (2013) believe to form the foundational framework that guides the development of dialogic feedback practice in higher education. When the data from both phases of this mixed methods study were compared against Yang and Carless' (2013) framework, the results overarchingly showed the *blended* or *asynchronous* use of audio feedback encourage the key processes of this framework. For example, of the two key elements noted under the cognitive dimension (facilitating student engagement and active use of feedback), the study showed data that positively related to both elements. This was also the case for the social-affective dimension, where data were present for both features; facilitating trusting relationships and emotional sensitivity. In the final dimension, the structural elements of feedback, the data from the study only fully supported one of the two features (utilising new technological non-disciplinary resources) with issues needing further consideration in the feature that aimed to encourage flexibility in provision of feedback so to facilitate student uptake. Primarily, issues which prevented a correspondence to Yang and Carless' (2013) framework, concerned the length of the audio recording available on Turnitin Grademark©. Specifically, this was due to the maximum three-minute recording length, as most students felt audio feedback could only be effectively applied to smaller essay type or oral assignments when using this virtual platform of delivery. Importantly, future research may consider the benefits of utilising other

avenues to deliver audio feedback, such as the voice comment feature available via PDF files or Microsoft Word documents (Chiang, 2009).

The integration of study data using a Framework for Dialogic Feedback (Yang & Carless, 2013), is a unique approach to the investigation of using asynchronous audio compared to written feedback in higher education. It is believed no study to date has measured and explored the dialogic nature of audio feedback provided via Turnitin Grademark©. Although the study findings have in part agreed with much of the wider audio feedback literature, what has been uniquely highlighted by this integration is the role of the audio technology in blending distinctions between the degrees of monologic and dialogic assignment feedback situations and the subsequent impact this has on the experiences of students in higher education. Specifically, from the data gathered in this study it is proposed that audio feedback may provide a form of feedback more akin to a '*monologic dialogue*', a term coined by Yakubinsky and Eskin (1997 [1923]) in their seminal works (see Figure, 8.1).

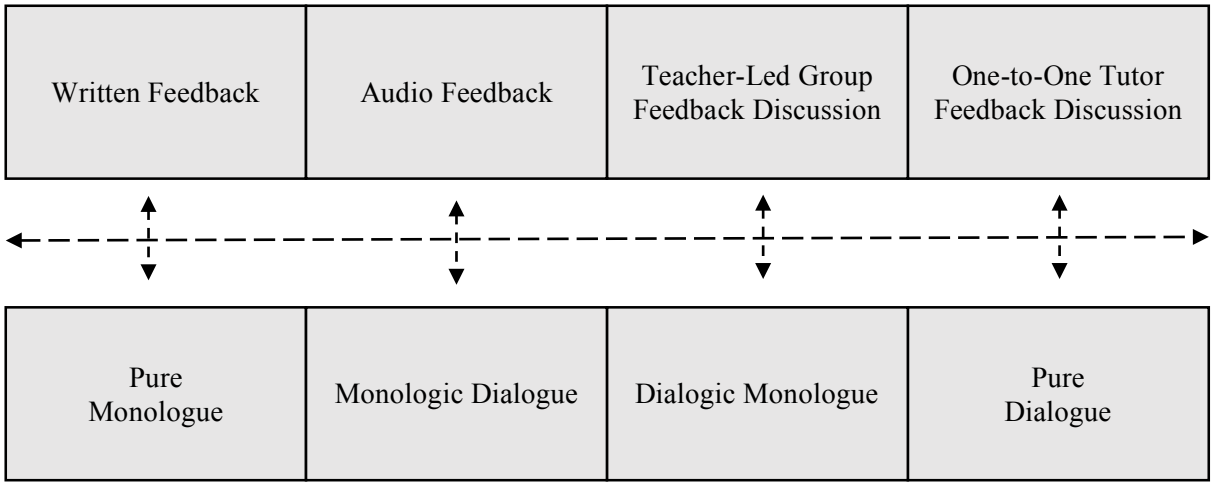

Figure 8.1 Yakubinsky & Eskin's (1997 [1923]) Degrees of Dialogicality adapted to Tutor Feedback Discourse

Such a claim may be made when considering the integration of data within this study clearly shows dialogic qualities are apparent in audio feedback. These qualities may be seen at a basic level through the linguistic features and enhanced ability to sense prosody emulating from the intonation and timbre of the tutor's voice. As outlined visually in Figure 8.1, audio feedback cannot be perceived as a 'pure dialogue' or a 'dialogic monologue', due to the separation in time and space between the tutor and student, which prevents the student from providing an immediate verbal response to their feedback (Wertch, 1998). However, the added component of this study, whereby the theoretical framework has been used as a lens through which to view the results, has allowed for further confirmation that despite this

separation in time and space, asynchronous audio feedback better encourages within students a process of deep engagement with tutor comments and enhanced confidence to engage in a one-to-one face-to-face feedback activity with a tutor if they deem it necessary, than does written feedback. Both of which are noted as central features of 'pure' dialogic modes of communication (Bakhtin, 1981 [1934-1935]; Voloshinov, 1973 [1929]; Vygotsky, 2004 [1934]).

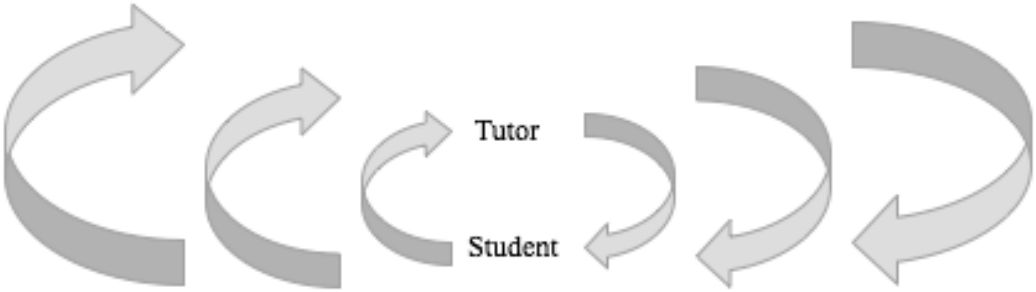

Figure 8.2 Opportunities for multi-layer student engagement through tutor asynchronous audio feedback, self-reflective feedback, tutor face-to-face feedback, and re-listening to audio feedback over time.

To elaborate, the integration of the data visibly suggests the potential of asynchronous audio technology to encourage opportunities for multi-level engagement in the feedback process. As presented visually in Figure 8.2, not only does the provision of spoken comments better encourage students to immediately reflect and act upon their feedback, this form of feedback also develops prolonged engagement by encouraging students to approach their tutor for further feedback and re-listen to their audio feedback over time. Therefore, while audio feedback may not be considered a 'pure' form of dialogue, the use of this technology appears to help *initiate* a process dialogic feedback in higher education. Findings which strongly correspond with the notion of a dialogic feedback cycle (Beaumont, O'Doherty, & Shannon, 2008) of central importance in the theoretical frame adopted for this study (Yang & Carless, 2013).

8.4 Strengths of the Study

Using a mixed methods approach, the integration of both quantitative and qualitative data was a central strength of this study. Mixed method designs add strength to the study outcomes when each type of data, or phase of the study, complements the other (Creswell, 2015). In this study, this was achieved by ensuring data integration throughout the mixed method design. Similar to the approach suggested by Onwuegbuzie and Burke Johnson (2006, p. 58), the researcher undertook a process whereby they "…consciously and carefully

assessed the extent to which the weakness from one approach can be compensated by the strengths from the other approach and then plan and design the study to fulfil this potential". This is referred to as "weakness minimization legitimation" (Onwuegbuzie & Burke Johnson, 2006, p. 58).

In phase two of the study, the semi structured qualitative interviews with students strengthened the overall study data as the interview findings helped to explain and unpick some of the findings of the quantitative phase. For example, the content analysis and the surveys indicated that audio feedback contained more depth of explanation than written feedback and the interviews helped unravel the positive attributes students emplaced upon this when using their feedback. Here it is suggested that the multiple quantitative analytic techniques used in phase one of the study, followed by the qualitative analytic technique used in phase two of the study, addressed what Onwuegbuzie and Burke Johnson (2006, p. 58) refer to as "conversion legitimation" as the data techniques resulted in interpretable data of a high inference quality. In order to ensure this was achieved in this study, different types of quantitative analysis were performed, such as the use of content and linguistic analysis of feedback scripts alongside survey and thematic analysis, to provide more than one type of interpretative outcome.

A further strength was the use of Yang and Carless' (2013) Three Factor Framework for Dialogic Feedback and the exploration of the factors in this framework through both comparative analysis of what feedback tutors provide to students on their assignment, together with an analysis of how students themselves feel they receive and interact with such comments. As explained in Chapter Two, little research has been done which directly analyses the potential of this method grounded in pedagogic theory (Nortcliffe & Middleton, 2011) and it was important that a theoretical lens was used to guide the study and thesis preparation. Yang and Carless' (2013) Framework was chosen because it includes a more recent, inclusive and complete framework for using dialogic feedback to foster productive student learning in higher education, than the previous works of Nicol and Macfarlane-Dick (2006) and Nicol (2010). Further, Yang and Carless (2013) recognise in their framework the inter-relationship of factors characterized into the three dimensions, whereby any developments made in one dimension may potentially support or undermine the actions made in another. Yang and Carless (2013) explain that the three dimensions need to be considered as a whole to assess how far any technological medium helps facilitate dialogic feedback in a discipline. Specifically, the framework may be used as an organizational devise so to chart not only the potential of audio feedback noted in the previous literature, but also to frame the

integration of the data from both phases of this study. It is this that makes Yang and Carless' (2013) Three-Factor Framework a useful lens through which to explore the dialogic potential of audio feedback.

The integration of data from both phases of the study and its comparison with Yang and Carless' (2013) three factor framework found that while the merged findings supported five of Yang and Carless' proposed features of dialogic feedback, it did not support one. This highlights the complexities of the theoretical constructs Yang and Carless used to develop their framework and the ability to use this framework to integrate data from a mixed methods study in a meaningful manner. From this, the need for further practical consideration and research on the three-minute maximum recording length set on Turnitin Grademark© could be identified.

8.5 Limitations of the Study

One of the main limitations of the study related to the sample utilised in phase one. Firstly, the sample size for the content and linguistic analysis consisted of feedback scripts provided by only two tutors. While the tutors were matched on certain variables, such as teaching experience deemed important by Hu and Choo (2015), they may have differed in their own personal pedagogic view or feedback style. Indeed, the effective use of audio feedback may be a reflection on the teachers' own pedagogic style, in that "much is dependent upon the behaviours and pedagogies of the tutors as much as the innate properties of the medium" (Gleaves & Walker, 2013, p. 259). It is important to recognise that such an acknowledgement constitutes a shift from a rather technologically deterministic view, to one that focuses upon how the technology is used by the tutor (Dixon, 2015). In order to gain the necessary statistical power to examine this relationship a larger sample set would have been required and participant selection using a stratified sampling technique rather than a convenience approach would have been necessary. Nonetheless, sometimes it is possible to make generalizations in the absence of statistical sampling approaches (Onwuegbuzie & Burke Johnson, 2006), so a reduced sample size may be possible in mixed method studies when the quantitative and qualitative phases of the study are integrated well. In this study, the data from the first phase was used to inform and develop the questions for the second phase and to recruit any participants. It is believed this helped somewhat to support the sampling method used in this study.

The second sampling issue noted within phase one of the study, concerns the tutor who provided the audio feedback to students within the end of module survey. As with many other projects utilising innovative technologies (e.g. Ice, Curtis, Phillips & Wells, 2007), the researcher for this study was the tutor who provided students with audio feedback in the psychology modules 'Drugs and Behaviour' and 'Forensic Psychology'. This issue of bias often is a necessary consideration with research focusing upon the use of audio technology to provide feedback, as the use of this technology is currently limited to a relatively small number of staff members in higher education (Dixon, 2015). While the involvement of the researcher is not uncommon within this field of research, the issue of bias must be taken into account, especially when considering the impact that the teachers own pedagogic style may have upon the feedback they provide to students (Gleaves & Walker, 2013). As such, a research project with a greater scope ought to consider acquiring a larger sample of teachers not involved in conducting the study to provide audio feedback. It is believed once audio feedback is more widely used within higher education institutions, this issue may be more easily overcome by researchers interested in this field. Further discussion of this issue is presented within Section 8.6 of this chapter.

Other limitations were also identified. Although the researcher believes that there were many strengths of utilising an explanatory sequential mixed method design, issues did arise in practice with this element of the study. As the design realised in this study followed an analysis of tutor feedback scripts and a student survey with student interviews, only an understanding of the experiences of students could be further sequentially developed within the qualitative phase. Preferably, in the qualitative phase of the study interviews with the tutors providing the audio feedback scripts analysed within quantitative phase would have also occurred. The researcher believes this added qualitative element within the study would have allowed for a more holistic understanding of *why* tutors differently provide assignment feedback in audio format, followed by an understanding of *how* this then impacted student reactions to their tutor's comments. However, due to the limited numbers of tutors utilising audio recording technology to provide feedback to students within the institution of focus for this research, such a methodological design could not take place. As such, the sequential use of the content and linguistic analysis of tutor feedback scripts was limited within this study to understanding whether students recognised the positive features noted within the audio feedback, as opposed to understanding why the tutors themselves provided their audio feedback differently and their motivations for doing so. Nevertheless, the researcher believes that the data types included within the mixed method design for this study, provided a

valuable contribution to developing a holistic understanding of the experiences of students when receiving audio recorded feedback in higher education.

Of further note, this study only focused upon the provision of audio feedback to students in the Social Science disciplines of Psychology and Criminology in one university. As noted by key authors in the literature (Yang & Carless, 2013), the academic discipline profoundly influences the feedback process the student and tutor may experience. It impacts the intellectual content of the feedback, how students and tutors relate to one another, and the practices and institutional policies that are in place (Yang & Carless, 2013). As such, a similar study that assessed students from different academic disciplines and across further UK institutions may have had a different outcome.

The final limitation to be discussed concerns the use of incentives to encourage students to partake in the online survey and semi-structured interviews for this study. In this study, students were offered an incentive in the form of a £10 Amazon voucher for their participation. Of critical concern, some researchers' question whether students are completing the study only to qualify for the incentive (Cole, Sarraf, & Wang, 2015). If so, the issue would be the quality of the data gathered. For example, in survey research, questions would arise concerning the extent to which students answered each item with honesty and thoughtfulness. However, in the past few decades incentives are perceived as increasingly necessary with student populations as research participation and survey response rates have been declining (Cole, Sarraf, & Wang, 2015). Consequently, incentives are perceived as one tool that educational researchers may use to boost response rates for studies using student populations (Cole, Sarraf, & Wang, 2015). For example, it is estimated over 50% of higher education institutions offer incentives to increase response rates for the National Student Survey (Cole, Sarraf, & Wang, 2015).

8.6 Reflexive Observations

As this study included a qualitative phase, reflexivity must be considered to enhance the "accuracy of the research and the credibility of the findings by accounting for researcher values, beliefs, knowledge, and biases" (Berger, 2015. p. 221). Therefore, the goal of reflexivity in qualitative research is to gain plausibility for the conclusions drawn within a study, by securing the researcher's trustworthiness (Berger, 2015; Buckner, 2005). Reflexivity entails the researcher contemplating their position within the research and the effect that they may have had on the research design, the data collected and the interpretation

and analysis of this data (Bryman, 2016). Issues relevant to the researcher's positioning include personal characteristics, such as gender, employment status, age, personal experiences, beliefs, preferences, biases, theoretical, ideological and political stances, and emotional responses to participants (Berger, 2015). I will now provide my reflexive observations during the research process, which will be organised within three phases: research design, data collection, analysis and interpretation of data.

I started my MPhil having graduated with an undergraduate degree in Criminology with Applied Psychology from Aberystwyth University. The research I had engaged in until this point held a positivistic background in experimental psychology and this was something I wanted to pursue further within my postgraduate study. Furthering my skills as a researcher was the key motivating factor that lead me to undertake this MPhil project. When starting the project, I had no understanding of audio feedback as I had not received it myself when I was an undergraduate. In fact, the use of Turnitin Grademark© was still relatively new when I was an undergraduate and most of the assignment feedback I received during this time was delivered via the use of written pen and paper. As such, my conceptions of audio feedback were developed by systematically engaging with the academic literature in this field. By engaging with the literature, it became apparent that the future directions in research could not effectively be studied via the use of a positivist experimental design as I had originally intended. This was as the identified knowledge gaps within the literature needed to be investigated through a socio-constructionist theoretical framework, that of the dialogic feedback triangle (Yang & Carless, 2013). This theoretical standpoint was one being increasingly adopted by researchers in the field of interest via the use of pragmatist mixed methods enquiry (e.g. Ajjawi, R., & Boud, 2017; Nicol, 2010; Price, Handley, & Millar, 2011). Therefore, the study design was largely developed from the identified knowledge gaps rather than my theoretical and methodological preferences. However, the methodological process undertaken during the MPhil is one which I have found invaluable to developing my skills as a researcher. Rather than holding a preference for positivist methodologies, I now understand the pragmatic benefits offered by the combination of quantitative and qualitative research methods.

During the data collection phases of the study I experienced difficulties in recruitment. Although I had aimed to recruit tutors from different departments of Aberystwyth University via a Tutor Survey (see Appendix E), only one tutor responded who wished to participate further. Unfortunately, this tutor had only provided their students with audio feedback in the previous academic year and was then on maternity leave, meaning that

too much time had passed to recruit these students to participate in phases three and four of the project (see Chapters 6 and 7). The time constraints of an MPhil project, whereby the research design and collection of all data ought to be completed within one year, meant that I decided not to try and recruit tutors from other universities due to the wait in response times. As I was a tutor on two modules whom I had already provided with audio feedback, I decided to recruit students from these modules to participate in the study. This created the need to reflect upon the power differentials within the interview phase of the study as I was both the tutor and the interviewer. Problematically, this could cause bias and shape the information that students would be willing to share (Berger, 2015). Firstly, I aimed to address this issue directly by prefacing all interviews with a statement, whereby I stated that although I was had provided them with their feedback, I would like to hear their honest opinions both 'good' and 'bad' so to improve practice. Students were also informed that all information they shared within the interview was confidential and would not impact upon their grading for any future assignments. However, I also feel this issue of bias was addressed by my being a student in the same department, who was only a few years older than those being interviewed. I believe that this helped me to equalise the power relations arising between myself and the participants, as I feel I could develop a good rapport and trust with the interviewees where they felt comfortable to express their honest perceptions of their feedback.

Finally, the analysis and interpretation phases of the study were strongly embedded within the theoretical framework for dialogic feedback (Yang & Carless, 2013). I feel that this use of the theoretical frame reduced the likelihood of my limited preconceptions concerning feedback from being imposed upon the interpretation of data within the thematic analysis and the integrated study data (see Chapter 7 and 8). Alongside the use of the theoretical frame, I also aimed to ensure the stages of the analysis were transparent for the reader. To achieve this I feel I provided sufficient data extracts within the write-up to allow the reader to evaluate the inferences I had drawn within my interpretations of the data.

8.7 Contributions

8.7.1 Implications for Future Research

This study advocates the benefits of employing a theoretical framework to explore the potential of audio technology to improve feedback practice in higher education. At a basic level, further research is needed to identify how far the components of Yang and Carless' (2013) Three Factor Framework for Dialogic Feedback are consistent, or not, with the use of

the voice commenting tool available via Turnitin Grademark©. While the merged findings from this study supported five of Yang and Carless' (2013) proposed features of dialogic feedback, it did not fully support one. This identifies the need for further research on the potential of audio feedback embedded within this framework and its theoretical underpinnings on dialogic pedagogy.

If choosing to apply Yang and Carless' (2013) Three Factor Framework for Dialogic Feedback, further research should aim to employ a standardized means of providing audio feedback to students in higher education. Such a need is highlighted due to the inconsistencies in the implementation and delivery of the audio technology, noted when reviewing the previous literature pertaining to the structural dimension of Yang and Carless' (2013) framework. Owing to the interplay between the three dimensions of dialogic feedback (Yang and Carless, 2013), it is believed that a standardised means of providing audio feedback is required in future research literature to allow for more *rigorous* and more *generalizable* assessment of the extent to which effective dialogic feedback is facilitated in any given discipline when using this technological medium. Considering the results from this study, it is suggested that the voice commenting tool available on Turnitin Grademark© may provide such a standardised platform to increase the consistency in implementation across institutions and facilitate a means of increasing the rigor of research aiming to assess how far audio feedback helps to facilitate dialogic feedback practices in higher education.

Methodologically speaking, a similar study with a larger quantitative sample would be beneficial as further statistical analysis would be possible. This would further ensure the differences observed in the content and linguistic analysis were not due to the teacher's own personal pedagogic view or feedback style, rather than the modality of feedback employed. However, in this mixed method study the results of each phase and data type largely corresponded, which may suggest this not to be the case. Subsequently, this demonstrates the benefits of using a mixed methods study to understand complex phenomena from different viewpoints. Very few studies have aimed to systematically analyse 'what' tutors say in their feedback to students when utilizing different modalities. As such, it is recommended further mixed methods studies, which correspond *what* tutors say to the *experiences* of students on a larger scale, will be a useful addition to the current work in the area concerning the dialogic potential of audio feedback in higher education.

Relatedly, a significant strand of research interest highlighted by this study concerns further developing an understanding of the tutor perspective of providing audio feedback. Not only would this shed light on tutor motivations concerning the provision of feedback content

analysed within this study, but it may also uncover other factors, such as the impact audio technology may have upon staff workloads in higher education. All of which are factors discussed by Yang & Carless (2013) in their Framework for Dialogic Feedback. Hence, further mixed method studies may wish to contrast the experiences of *students* with the experiences of academic *staff*, so to uncover a holistic understanding of the dialogic potential of using audio feedback in higher education.

To better understand the impact of *what* feedback tutors provide to students on their assignments, further research is required on the specific role and function of certain linguistic devices and how they might influence student perceptions of their learning process. For example, by assessing the findings of this study in relation to the previous literature in this field (Austin, 2016; Hu & Choo, 2015; Mutch, 2003), the positive potential of the use of plural pronouns (e.g. We) in assignment feedback is proposed. Specifically, it is suggested the use of this linguistic device might help to develop a more collaborative form of feedback that encourages students to feel more comfortable approaching their tutor for face-to-face feedback. However, the use of this linguistic device raises questions surrounding students' perceptions of ownership and responsibility when improving their work as they may misinterpret these comments. To overcome this issue the practical recommendations for this project only suggest implementing the plural pronoun 'we' when encouraging the student to visit for a face-to-face feedback session. Yet, further research would be beneficial so to fully understand the potential tensions arising when using specific linguistic devices in assignment feedback and better advise tutors on how they may be best used in practice.

Further research is required which compares student perceptions of receiving audio feedback by using an experimental design as rather than a survey design. Importantly, the survey methodology utilised in this study allowed for an understanding and description of students' perceptions of receiving audio feedback in relation to aspects of key importance in Yang and Carless' (2013) Framework. However, now the potential of audio feedback has been suggested, an experimental design would allow for a more accurate assessment as to the relationship between the factors arising in the theoretical frame and the provision of feedback using different modalities.

8.7.2 Implications for Practice

This study has shown the feasible dialogic potential of providing feedback to students using audio technology. While Turnitin Grademark© was used as the platform through which to

provide students with audio feedback in this study, it must be acknowledged that other forms of delivering audio feedback are available. Based upon the findings of this mixed method study, recommendations for tutor and student best practice are suggested and applied to the voice commenting tool available on Turnitin Grademark©. It is also believed that these recommendations may be easily applied to other means of providing audio feedback, such as emailed MP3 recordings. These recommendations offer a starting point for the development of effective feedback practice that may benefit both students and tutors in higher education. For teachers providing feedback, this opens the door to a stronger focus on the rapport of feedback and how feedback is communicated to students. For students receiving feedback, audio technology allows for a differential means of engaging with their tutor's comments, which may encourage them to use their feedback to improve their future work.

8.7.2.1 Practical Recommendations for Tutor Use of Audio Feedback Best Practice

Based upon the study findings, the following approaches are recommended for tutor best practice when using audio technology to provide feedback:

- Use an audio recording device of a good quality to enable students to appreciate the informational and personal attributes offered by your tone of voice. A high-quality microphone or earphones with USB output is recommended as a means to ensure the recording level is not too low as to distort the sound. Do a sound check by re-listening to the recording yourself before saving it on Turnitin Grademark©.

- Voice comments should not be spoken in an overly formal manner. Students appreciate a more informal approach for the personal and caring feel it provides. To achieve this style of feedback, consider including the following features in your spoken feedback:

    - Make personal gestures or anecdotes when providing your feedback, such as "I THINK your writing is clear".

    - Make sensitive reference to the student within their feedback, such as "YOU have written a very good assignment". However, this should be primarily for positive comments and rather than negative feedback comments.

- Frame your comments for improvement in the feedback as a collaborative task between you and the student that may be achieved in a face-to-face feedback session, such as "To improve for next time WE could look for some more academic references rather than websites. Please come and see me so that I can show you how to find academic sources".

- For less central areas of concern within the student's assignment, you could soften the criticism you provide. For example, say "Your writing is A BIT too descriptive" rather than "Your writing is too descriptive".

- Include questions aimed at the student within the feedback you provide to encourage a response, such as "Are you suggesting that Freud's theory is accurate or inaccurate?".

- Audio comments are most useful when supplemented with 'Quick Marks' available on Turnitin Grademark©, which may be placed in-text to directly acknowledge and pinpoint an issue in the student's work. The audio feedback may then be used to elaborate and provide more detail on these issues. For example, within the 'Quick Mark' you could acknowledge an issue by stating:

    - Quick Mark: "You need to include a critical point here. Please listen to your voice comment for further explanation".

- In the audio comment give examples of *how* you think the student may improve upon the acknowledged issue for future assignments and *why* this change is needed, especially when outlining any criticisms. Students find suggesting a specific text book or article to be of use here. For example, within the audio recording you could follow-up the 'Quick Mark' by stating:

    - Audio Comment: "In your in-text comments I mentioned the need to include a few more critical points within your essay. This just means building up your ability to form the essay into a little bit more of a logical and flowing argument. To boost up your grade [*Inclusion of 'WHY' the student should make this improvement],* I think we could aim to integrate a bit more of an argument to

answer the question and a critical point in every paragraph, so the paragraphs are not overly descriptive in their content. So to do this [*Inclusion of 'HOW' the student can improve for next time*], we can follow the PEECR structure – and I have uploaded a PowerPoint explaining this on the assignment tab on Blackboard *[Inclusion of resource material]*. This suggests every paragraph should start by providing a POINT, EVIDENCE to support that point, an EXPLANATION of how that information answers the question, a CRITICAL point - so think here: Are there any studies that suggest different findings? Are there any issues with the validity or reliability of the findings I have based my argument on? Then LINK to the question - What do you think all the discussion included in this paragraph suggests for the issue of focus in the question set? Explicitly state your argument in a sentence at the end of the paragraph – and for this essay it was the issue of …".

- In the voice comment hold a focus more so on developing the student's disciplinary skills (e.g. formation of critical analysis), as these issues may be harder to effectively explain when using written comments, than matters concerning the likes of referencing or grammar.

- When providing audio feedback ensure not to rush. Taking into consideration the three-minute recording time set by Turnitin Grademark©, it is best to comment in detail about two or three issues that the student can proactively do something about to improve their future work.

- Due to the time limit imposed by Turnitin Grademark© the audio commenting tool on this platform is best used with assignments of a smaller calibre, such as essay type assignments or oral presentations, rather than longer assignments similar to final year dissertation projects. Other means of providing audio feedback for larger assignments may be available, e.g. emailed MP3 recordings (see Chiang, 2009), yet consideration must be given to ensuring the longer recording time does not obscure the key messages of the feedback and overwhelm students.

8.7.2.2 Practical Recommendations for Student Best Practice

As represented visually in Figure 8.3, the following approaches are recommended for students to best engage with their feedback when provided using audio technology:

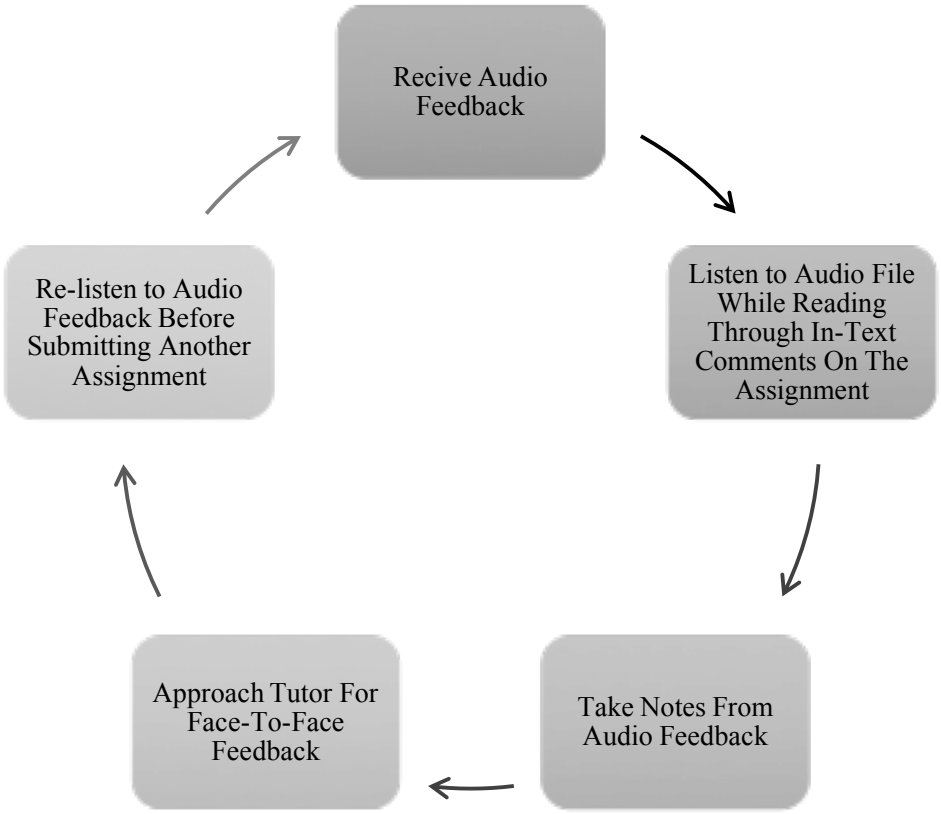

Figure 8.3 Practical recommendations for students to implement when receiving audio feedback

- Once you know you have received your grade and feedback, open your assignment on Turnitin Grademark©. It is best to do this when you have access to a computer that is in a quite area with speakers or headphones, so that you can hear your tutors' voice comment without any interruptions.

- Read through your in-text comments provided by your tutor first and then listen to your voice comment. Within the in-text comments your tutor will acknowledge any areas that you have done well or could improve upon. For example, your tutor may state:

    - In-Text Comment: "You need to include a critical point here. Please listen to your voice comment for further explanation".

Your tutor will then elaborate and provide more detail on these issues within the audio feedback. For example, you tutor may explain how and why they feel you need to include a critical point in your assignment. By adopting this order when opening your feedback, you will be able to more clearly understand where in the assignment you could improve and how you could achieve this for the future.

- Once you have compared your in-text comments and your voice comment, you could take notes from your feedback. For example, you could bullet-point three key issues within your assignment and how your tutor suggested you address these issues to improve your future work. This process will allow you to notice any areas of your feedback which you do not fully understand or require further clarity upon.

- To clarify any elements of your feedback you should approach your tutor for face-to-face feedback. In many universities, this may be arranged by emailing your tutor to see when they may be available. At the arranged time, take your bullet point list with you regarding your feedback. This will allow you to discuss those elements of your feedback that you needed further clarity on. Clarifying your feedback with a tutor will allow you to improve your assignments in the future.

- Before submitting another assignment re-listen to your audio feedback. Re-listening to your vice comment will only take three minutes of your time and it may stop you from repeating any of the issues noted by your tutor in your previous assignment.

8.8 Conclusion of Thesis

The aim of this study was to explore how far providing audio feedback may better serve as a facilitator of dialogic feedback in higher education, than the traditional method of written feedback. The thesis presented a review of the literature, including a theoretical framework which then served as an organisational devise to chart the dialogic potential of audio feedback suggested in previous literature. This review benchmarked the current state of knowledge about the use of audio feedback and highlighted the need to develop a more holistic understanding of the *experiences* of those students receiving feedback though this technological medium in higher education.

A detailed account of the study methodology has been offered including details relating to phase one and phase two of the study. In order to maximise the data collected and provide a holistic picture of the dialogic potential of audio feedback, a mixed method sequential explanatory design was selected as the most appropriate and accessible way to conduct the study. This is as an analysis of *what* feedback tutors provide to students on their assignment, alongside an analysis of how students *themselves* receive and interact with such comments, could be conducted using this methodological approach. Additionally, the study design was underpinned by the Three Factor Framework for Dialogic Feedback proposed by Yang and Carless (2013) as this would enable an analysis of the extent to which dialogic feedback was encouraged using audio technology.

The findings from each data type and phase of the study were integrated to help answer the study questions. The findings help to unravel some of the questions around the experiences of students receiving audio feedback and its impact upon their emotional and cognitive engagement. In particular, the study has shown that using audio technology to provide feedback is thought to better help promote the features of dialogic feedback noted by Yang and Carless (2013) in their central framework. Primarily, this includes facilitating opportunities for multi-layer student learning through the provision of asynchronous audio feedback, which involves students engaging in self-reflection, feeling confident to approach their tutor for further face-to-face feedback, and re-listening to their audio feedback over time.

Overall, this study has provided insight into the enhanced dialogic potential of audio feedback, with the intent to overcome some of the problems noted in the literature concerning the traditional method of written feedback. It suggests practical approaches for tutor best practice when using audio feedback that, if implemented, would provide a pivotal step towards the re-conceptualization of feedback as a rich process of dialogic communication in higher education. As such, this study contributes to the growing literature that impresses the potential of new technologies to feasibly stimulate and facilitate dialogic feedback in higher education.

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Appendices

Appendix A Breakdown of Research Questions

Central Research Question:

Compared to using traditional methods of written feedback, how far might providing feedback to students using audio technology serve as a facilitator of effective dialogic feedback in higher education?

Sub-Questions Needed to Address the Central Research Question:

How far might the provision of assessment feedback to students using audio recording technology encourage the cognitive features of dialogic feedback, when compared to written feedback?

Content Analysis/Quantitative Data Type 1/ Chapter 4:

1. Are there similarities/differences in the types of issues commented upon by tutors providing feedback using audio and written modalities?

2. Are there similarities/differences in the depth of issues commented upon by tutors providing feedback using audio and written modalities?

Student Survey/ Quantitative Data Type 3/ Chapter 6:

1. How do students use feedback provided in audio format to support their learning and how does this differ to their use of written feedback?

2. How clearly can students understand and interpret the content of feedback provided in audio format and how does this differ to written feedback?

Student Interviews/ Qualitative Data Type 1/ Chapter 7:

1. What are student perceptions concerning the depth of tutors' feedback comments when providing audio as opposed to written feedback?

2. Why do students use feedback provided in audio format more productively to support their learning than feedback provided in written format?

3. Why do students feel the content of feedback provided in audio format is clearer to understand and interpret than feedback provided in written format?

How far might the provision of assessment feedback to students using audio recording technology encourage the positive social-affective features of dialogic feedback, when compared to written feedback?

Linguistic Analysis/ Quantitative Data Type 2/ Chapter 5:

1. Are there similarities/differences in the occurrence of evaluative language resources employed by tutors providing feedback using audio and written modalities?

2. Are there similarities/differences in the variation of evaluative language resources employed by tutors providing feedback using audio and written modalities?

Student Survey/ Quantitative Data Type 3/ Chapter 6:

1. Between audio and written feedback, which do students believe better encourages positive emotional responses when receiving assignment feedback?

2. Between audio and written feedback, which do students believe is a more effective means of interaction with their instructor?

3. Between audio and written feedback, which do students believe better encourages tutor/student interaction that usually occurs in face-to-face classes?

Student Interviews/ Qualitative Data Type 1/ Chapter 7:

4. What are student perceptions concerning the formality of the language used by tutors when providing audio as opposed to written feedback?

5. Why do students believe that receiving audio feedback better encourages positive emotional responses when compared to written feedback?

6. Why do students believe audio feedback better encourages tutor/student interaction that usually occurs in face-to-face classes?

How might the provision of assessment feedback to students using audio recording technology encourage the structural features of dialogic feedback, when compared to written feedback?

Student Survey/ Quantitative Data Type 3/ Chapter 6:

1. What modality of feedback would students prefer to receive for other modules in the future?

2. What improvements do students feel could be made to audio feedback?

Student Interviews/ Qualitative Data Type 1/ Chapter 7:

1. Why do students feel audio feedback is best combined with in-text written comments?

2. Why do students feel the length of audio feedback should be extended?

How might the research findings have real world application when applied to improve feedback practice in higher education?

Practical Recommendations/Chapter 8:

1. What practical recommendations can be made from the research findings for tutors to implement when providing feedback in higher education?

Practical Recommendations/Chapter 8:

2. What practical recommendations can be made from the research findings for students to implement when using their feedback in higher education?

Appendix B Department of Psychology Ethics Application Form

Department of Psychology Research Ethics Committee (DoP REC)
Application and review form for staff and PG student applying to the DoP REC

Who should fill out this form?
This form is for use by staff and PGR students of the Department of Psychology, at Aberystwyth University who have received a 'departmental' response from the University on-line ethics review system.
The application should therefore be for conducting research that does not expose participants to any physical or psychological conditions different to those experienced in everyday life; where participants are classed as not vulnerable and aged 18 or over.

Section A: Confirmation of suitability for consideration by Department of Psychology REC

(please tick)	**True**	**False**
I have completed the University online assessment form and had a Department return response	x	
Participants will not be exposed to any physical or psychological conditions different from those experienced in everyday life	x	
Participants are not classified as vulnerable or under 18 years of age	x	
Participants will not be recruited through the NHS or its partner organisations	x	
The project does not need a DBS (ex-CRB) check	x	
The project fulfils all departmental protocols (e.g. BPS requirements for ethical research) (level 1) *or* if it does expose participants to some physical or psychological conditions which are above that experienced in everyday life the research incorporates appropriate steps to control or minimise these conditions, the researcher has demonstrated the necessary skills and understanding, and the project fulfils all legal and university regulations, which are discussed in this application in appropriate detail (level 2).	x	

If any answers to **Section A** are **'False'** please either a) refer the application to the Aberystwyth University Research Ethics Committee (see http://www.aber.ac.uk/en/research/ethical-research/) or b) review your ideas and develop a new proposal.

If all answers to **Section A** are **'True'** then please complete **sections B, C and D** of the following form. Please refer to relevant documents (in Blackboard ethics folder) for further information and guidance. When complete, please return your form as a single document, including appendices, by emailing it to the Chair of the committee (wjg3@aber.ac.uk) requesting a confirmation email.

PLEASE NOTE THAT RESEARCH MAY ONLY COMMENCE ONCE ETHICAL APPROVAL HAS BEEN OBTAINED. NO DISSERTATION CAN BE SUBMITTED THAT DRAWS ON RESEARCH WITHOUT ETHICAL CLEARANCE

Section B: Applicant details

Name of applicants, with lead applicant's name first if more than one member of staff involved	Alexandra Brookes, Gareth Norris

E-mail address	alb61@aber.ac.uk
Title of proposed research	Audio versus Written Feedback: A Dialogic Insight.

Section C: Project description and ethical considerations

1. Briefly describe the main aims of the research you wish to undertake. Please use non-technical language wherever possible.

In recent years, research has shown that student engagement with the feedback they are given is one of the central reasons for student academic achievement (Price et al, 2010). Despite this, research has also highlighted student feedback as being a constant area of concern, not only in the United Kingdom but also across the western world (Fielding et al, 2010). Given this need for improvement researchers and academics are looking for new technologies as ways of delivering feedback to students.

There is an increasing interest in the provision of audio-feedback, in the form of voice comments, via Turnitin Grade Mark. This has been associated with the growing availability of cheap voice recording instruments and, thus far, has been found to be preferred by students and staff for a number of reasons; including a 'reduced time spent on providing feedback' (Morris & Chikwa, 2016). However, there is little research evidence on the use of audio-feedback that provides a clear pedagogical rationale (Nicol, 2009). This research intends to identify *where* and *why* audio-technology may add value to the higher education experience by theoretically engaging with 'Dialogic pedagogy', the newly emerging model of higher education, rather than just focusing upon the potential for reduced 'costs' and 'staff workloads'.

The proposed study is part of a wider research project funded by the Learning and Teaching Enhancement Fund, which aims to investigate tutors provision of audio and written summative feedback, the students consequent satisfaction and use of this feedback, and whether the type of feedback received by the student impacts upon their relationship with their module tutor. It is believed that by focusing on summative feedback previously provided to students, this will not interrupt student learning.

2. Briefly describe the overall design of the project

The proposed study employs a mixed method 'exploratory sequential' design; whereby initial survey data will be analysed and followed up by semi-structured interviews, so to provide an explanation of the initial quantitative results (Creswell, 2014). The Initial quantitative phase will consist of cross sectional survey design across departments (Psychology and Law and Criminology). Scores from this phase will be analysed using descriptive and inferential statistics. With consideration to the results of the surveys, the qualitative phase will consist of interviews with both staff and students. Inferences will then be drawn from this phase to help explain and give further depth to the survey findings.

3. Briefly describe the methods of data collection and analysis. Please include the design, procedure (including location of the proposed research, such as departmental labs, schools, etc.) and any materials used or measures to be employed (e.g., questionnaire responses, reaction times, accuracy, skin conductance responses, etc.). If questionnaire or interviews are to be used, please provide the questionnaire / interview questions and schedule in the appendices.

The overall the research employs a mixed method 'exploratory sequential' design involving 4 major phases:

(a) Collecting Survey Data with Students and Tutors

(b) Analysing Survey Data

(c) Interviews with Tutors and Students

(d) Interpretation of Findings

The initial survey data will be drawn from four different populations:

1) Criminology students in two modules whereby half received audio and half written summative feedback
2) Psychology students having received summative audio-feedback in either a taught or online module
3) Tutors having previously provided written-feedback
4) Tutors having previously provided audio-feedback

These student groups were determined by opportunity; they were students who, without intervention from this research, were given audio or written feedback from their tutor in semester one of the 2016/2017 academic year. The student groups have different characteristics which may yield differential results: one psychology module was taught only online and all students were given audio-feedback on their summative assessment; one taught psychology module where all students received audio-feedback on their summative assessment; and two criminology modules that were marked by two tutors, one of which provided audio-feedback and the other written-feedback. Similarly, the tutor groups were also determined by opportunity; they are tutors who chose to provide either written or audio-feedback to their students' assignments. The research requires approximately 20 individuals from each group to complete the surveys.

The initial design is cross sectional, with comparisons being made between the different approaches to providing feedback (audio and written-feedback), across departments (Psychology and Law and Criminology) and through participants self-reported demographics. These four separate surveys will be distributed online, each containing no more than 25 questions divided into a number of sections concerning their satisfaction, use or provision of feedback, its content, and its relational impact (see Appendix A; B; C; D). The online survey will be open to potential participants for a two week period which will be restricted to BOS available dates; such available dates will be published to any potential participants. Participation in the survey will last no longer than ten minutes. The collected data scores will be analysed using descriptive and inferential statistic where appropriate.

Such quantitative results will then be used to determine what issues will need further exploration in the qualitative phase of the research and what questions to ask participants during this stage in the tutor and student interviews. The number of students and tutors which aim to be recruited for the interviews are 60; recruiting 10 students per module and 10 tutors providing each type of feedback. The interviews will take place in the psychology departments meeting room and should last no longer than 45 minutes. Questions during these interviews are expected to extend on the reasons for individuals responses concerning their satisfaction, provision/use, content, and the relational impact of the feedback (See Appendix F, G & H for the provisional interview structure). An information sheet will be provided to potential participants and consent will be obtained before the interview recording takes place (See Appendix F & I). Data in this phase will be recorded in audio format and later transcribed for analysis.

4. Describe the participants: give the age range, gender, inclusion and exclusion criteria/procedures, and any particular characteristics pertinent to the research project. Explain how the participants will be selected and recruited.

The student sample will be accessed through the Psychology modules 'Drugs and Behaviour – PS20820' and 'Forensic Psychology – PS21220', the Criminology modules 'Psychological Explanations of Criminal Behaviour – CR31720' and 'Foundations of Psychology – CR12320'. The researchers will ask students who partook in these modules in their first semester of the academic year 2016/2017, via email, if they wish to fill out a survey concerning their opinions of the audio/written feedback they were given on their last summative assessment of the module. All volunteers from the designated modules will be able to participate in the

survey as there is no cap on response numbers. At the end of the survey participants will be asked if they would like to participate in an interview and, if 'yes', would they provide their email address; this will be kept separately from the survey data.
Similarly, tutors in both the Criminology and Psychology departments at Aberystwyth University will be emailed and asked if they whether they would like to fill out the online survey concerning their feedback provision. The research holds an interest both in those tutors providing written-feedback and those providing audio-feedback. If this sample yielded proves to be too small, an email will be sent to further departments within Aberystwyth University. At the end of the survey participants will be asked if they would like to participate in an interview and, if 'yes', would they provide their email address; this will be kept separately from the survey data.
Individuals will be selected for the interview on a first come first served basis. The number of students and tutors which aim to be recruited for the interviews are 60; recruiting 10 students per module and 10 tutors providing each type of feedback.

All participants will be over the age of 18.

5. Will any incentives be offered for participation? If so, please specify and confirm that the level/type of reward offered is ethical (e.g. with reference to BPS guidelines)

(See http://www.bps.org.uk/sites/default/files/documents/code_of_ethics_and_conduct.pdf AND/OR http://www.bps.org.uk/sites/default/files/documents/code_of_human_research_ethics.pdf).

A £20 Amazon voucher will be offered as an incentive to participate in the survey – a prize a random participant who provides their email address.
An incentive of a £10 amazon voucher will be paid to each volunteer who participates in the interview.

6. Will written informed consent be sought from participants? Explain how this will happen below. For example, in the case of online studies, how will you ensure consent? For audio/video recording, specific consent must be sought.

Yes – via web form. If consent is not given then the survey will cease.
For the student and tutor interviews a written consent form will be provided before the interview. Additional consent will be obtained to have the interview recorded. If consent is not given then the interview will not take place (see Appendix E).

7. What potential risks to the participants do you foresee and how do you propose to ameliorate/deal with potential risks?

It is possible some students and staff may voice negative comments, but they have sufficient avenues to raise any concerns over feedback through existing departmental/institute structures. All participants are told in advance that no action will be taken over comments made and that the survey is for research purposes only. Advice on the appropriate channels (Tell Us Now, etc.) will be provided to students they can follow-up any specific issues via the appropriate established channels. Advice on appropriate channels (Head of department, Union representatives, etc.) will be provided to tutors so that the can follow up any specific issues via the appropriate established channels.

8. How will you brief and debrief participants? Please include a participant information sheet and a debrief information sheet (if relevant) in your appendices.

At the start of the survey information about the purposes of the study will be provided and an e-mail address for anyone wanting more information (see Appendix A; B; C; D).
Before the interview commences all interviewees will be briefed and told of their ability to withdraw at any stage without penalty (see Appendix F; G; H)

9. Is there any deception involved? If so, give a rationale and explanation for how you will address this ethically.

Note the BPS Code of Conduct states (p24): Where an essential element of the research design would be compromised by full disclosure to participants, the withholding of information should be specified in the project protocol that is subjected to ethics review and explicit procedures should be stated to obviate any potential harm arising from such withholding. Deception or covert collection of data should only take place where it is essential to achieve the research results required, where the research objective has strong scientific merit and where there is an appropriate risk management and harm alleviation strategy.
(See: http://www.bps.org.uk/sites/default/files/documents/code_of_human_research_ethics.pdf)

No deception is involved.

10. What potential risks to the interests of the researchers do you foresee and how will you ameliorate/deal with potential risks? If a risk assessment is required (e.g. in giving supplements), please state you have completed the risk assessment form (see your supervisor/dissertation handbook for details).

No risks to the researcher are foreseen. The dates the survey will take place are restricted to BOS dates and will be published to any potential participants. Interviews will take place during working hours on the university campus.

11. Will participants be informed of the right to withdraw without penalty? Please explain the procedures by which participants will be able to withdraw, both during, and after the study.

Participants will be reminded of their ability to exit the online survey at any point.
Those individuals participating in the interviews will also be told in their brief that they are able to withdraw themselves and their data at any point in the interview and also up to June 2017 if they email the researcher.

12. How do you propose to ensure participants' confidentiality and anonymity?

All survey responses are anonymous - only those providing an email for further participation in interviews or to be included in the draw will give personal identifiable information. These email addresses will be separated from the data set upon downloading the data from the web server.
Those participating in the interviews will also be anonymous – no identifying data will be collected.

13. Please describe how you will store *all* forms of gathered data, including consent forms, paper files, electronic files etc. Explain how you will ensure data security, and how and when data will be destroyed or stored (e.g. as part of open access data).

Generated data is anonymous and will be stored securely, with individual file password protection, on the university file store. All Consent forms will be electronic and saved on the IS university file store. All data will be stored for 5 years and IS shall safely remove it after this time.

CHECKLIST OF ATTACHMENTS: PLEASE REMEMBER TO INCLUDE COPIES OF EACH OF THE FOLLOWING AS APPENDICES TO THIS DOCUMENT *INCOMPLETE APPLICATIONS CANNOT BE CONSIDERED*

X Copy of Participant Information Sheet
X Copy of Consent Form
X Copy of Participant Debrief
X Copy/details of any materials (e.g.) questionnaires and/or interview schedules to be employed

Please continue to section D below.

Section D: Ethics Checklist

Staff should complete the checklist table below. If any response is not applicable, please write NA. If you tick 'false' to any of the checklist please justify your responses below the table or review your application and research design.

(please tick)	***TRUE***	***FALSE***
Participants are not classed as vulnerable	x	
All appropriate information has been provided by the researcher (e.g. participant information sheets and informed consent forms/debriefing sheets included, and, where relevant, any letters of approval for research from managers of organisations).	x	
The project involves no deception, or covert observation of, participants.	x	
The research does not expose participants to physical and/or psychological conditions that are different to those experienced in their everyday lives.	x	
All participants will provide written consent (or acceptable equivalent) to participating in the project before data collection begins.	x	
All participants will be fully informed about why the project is being conducted and what their participation will involve.	x	
All participants will be fully informed about what data will be collected, and what will be done with this data during and after the project.	x	
Recruitment/incentivisation procedures are ethically appropriate.	x	
Issues of inclusion and exclusion have been dealt with adequately.	x	
Explicit consent will be sought for audio, video or photographic recording of participants.	x	
Confidentiality of data is adequately protected (for qualitative projects, where excerpts will be used, please leave blank).	x	
Anonymity of data is adequately protected.	x	
Participants are clearly informed about their right to withdraw from the study by the (realistic) deadline date identified.	x	
Adequate arrangements have been made for the security of the data (electronic or otherwise) and disposal/storage of the data after completion of the project.	x	
If the project requires it, adequate debrief procedures are in place to ensure that participants are not caused emotional or physical harm.	x	
There are no undue risks to participant/researcher regarding the location of the research	x	

and/or any minor risk has been addressed adequately (e.g. information on counselling services provided, compliance with lone researcher protocols).		
The scientific benefit of the project outweighs any minor ethical cost (here in terms of their time/inconvenience) to participants.	x	
Adequate arrangements for participant safety have been made where physical activity or prolonged testing are part of the project.	x	
The researcher is deemed competent to undertake the project proposed, and all/any training needs are/will be adequately addressed.	x	
If participants need permission from their organisation to participate in the study such permission will be obtained.	N/A	
Where research is funded, appropriate obligations have been considered.	N/A	

Appendix C Ethics Application Response

Department of Psychology Research Committee
ETHICS APPLICATION RESPONSE

Name of applicant:	Alexandra Brookes
Applicant's email:	alb61@aber.ac.uk
Title of study:	Audio versus Written Feedback: A Dialogic Insight.
Type of researcher (please tick):	☐ Undergraduate student ☒ Postgraduate student ☐ Member of staff own research ☐ Member of staff for teaching based research

Outcome of your submission:

☒ The submission is passed with no required amendments and research can commence.

☐ The submission is passed with no required amendments and research can commence. However, the reviewers have recommendations that may improve the project for consideration, listed below

Recommendations:

☐ The submission is passed subject to *minor* amendments. Research cannot commence until a revised submission that addresses the conditions outlined below is resubmitted. These minor amendments are designed to improve aspects of the study such as clarity, typos in participant information sheets, minor mistakes such as small differences in information given across the application. Applicants must address these amendments in section F and re-submit the form to the Chair of the committee for consideration (wjg3@aber.ac.uk) Conditions are listed below.

Conditions:

☐ The reviewers identify major amendments required either in relation to BPS ethical requirements according to the 'Code of Human Research Ethics' or significant changes required to the research design. The submission is therefore not passed. Research cannot commence and a new application is required.

Rationale for major amendments:

James Greville, Chair, Psychology Department Ethics Committee

Date: 22.02.17

Appendix D Application for Ethics Minor Amendment

Application for minor amendment:

Project title: Audio Versus Written Feedback: A Dialogic Insight

1. **Nature of amendment**:

   The initial ethical clearance was granted on the basis of a set of student surveys regarding their feedback; however, initial results indicate that it is necessary to go back a stage and assess the nature of the actual feedback being provided. This amendment to the proposed research is that of a content and linguistic analysis of the feedback given to students. This part of the research aims to explore whether the content of the feedback provided to students differs dependent upon its modality (audio/written feedback types).

   The data to be accessed is that of 30 pieces of anonymous feedback provided within the Criminology module "CR12320" in the academic year of 2016/2017. Within this module half the students received their feedback in written form and half in audio; meaning 15 pieces of each feedback modality will be used within the analysis.

   This data will be analysed in accordance to two existing coding frameworks. The first coding system focuses on the types of comments made by the tutor (see Brown & Glover, 2006). The second focuses upon the forms of language used to express feedback comments (see Martin & White, 2005).

2. **Reason for amendment:**

   The focus on the content of the feedback is needed to aid in the understanding of students' responses to the survey provided as part of this research project. It is believed that this focus will provide an increasingly holistic view and enable the researcher to provide practical recommendations for the use of audio technology, based on pedagogic theory.

3. **Ethical issues e.g. informed consent:**

   Informed consent – the tutors who previously provided this feedback to their students will be contacted for consent. The forms will contain all the relevant information about the research and if they wish they can agree for their feedback to be included in the analysis (see Appendices).

4. **How the ethical issues are addressed**:

   A consent form with the relevant information will be sent to the two lecturers who provided the feedback within this module via email. No data shall be obtained unless a signed copy of the consent form is returned to the researcher. Informed consent is gained from these tutors only as the assignment feedback is their intellectual property. The students' essays are not of focus for this study and, as such, they will not be contacted for consent.

Confidentiality will be assured by anonymising the tutors' names within the research report and analysis. Data will be addressed dependent upon the modality of the feedback.

My project supervisor Dr. Gareth Norris has discussed the proposed amendment(s) with me and has agreed that it/they are required.

Signature student:

Outcome: I agree/~~disagree~~ with the proposed amendment(s) to the above study

James Greville, Chair, Psychology Department REC

Date …07.08.17…….

Appendix E Survey of Tutors Using Audio Feedback

Tutor Experiences of Audio-Feedback

Page 1: Study Information

Welcome to the survey on audio-feedback.

The purpose of this survey is to gain an understanding of your opinions and experiences of providing audio-feedback to students.

This research is being led by Alexandra Brookes (alb61@aber.ac.uk), Dr Gareth Norris (ggn@aber.ac.uk) and Dr Heather Norris (hnn1@aber.ac.uk) from the departments of Psychology and Criminology at Aberystwyth University.

The online survey will ask 15 'tick-box' questions that will take approximately 10 minutes to complete.

This survey is completely anonymous and entirely voluntary; you can withdraw your participationat any time.

There is no incentive to take part other than the option to be entered in to a prize draw to win a £20 amazon voucher, of which you can opt in or out for at the end of the survey. If you do want to be entered in to the draw you will need to provide an email address which will be recorded separately from your responses.

Unfortunately, we cannot act upon the responses that you make as this survey is for research purposes only. However, should you have any concerns regarding student feedback practices, please do not hesitate to contact your Head of Department. Your views will be used to guide the way in which feedback is provided. The data will be presented at conferences and in teaching publications.

Thank you for sharing your opinions and experiences of providing student feedback.

Please tick the box to say you have read and agreed to the survey and consent to anonymous data being used for research: * *Required*

- ○ I Agree
- ○ I Disagree

Page 2: About You...

Are you:

- Male
- Female

How old are you?

- Under 25
- 25 - 29
- 30 - 39
- 40 - 49
- 50 - 59
- 60 +

How long have you been working as a lecturer?

- This is my first year
- 1 - 2 years
- 3 - 5 years
- 6 - 10 years
- 11 - 15 years
- 16 - 20 years
- More than 20 years

How long have you been working as a lecturer **at Aberystwyth University**?

- This is my first year
- 1 - 2 years
- 3 - 5 years
- 6 - 10 years
- 11 -15 years
- 16 - 20 years
- More than 20 years

How many universities have you worked at as a lecturer? *Please write in a number:*

2 / 9

Are you a fellow of the Higher Education Academy?

- Yes
- No

If you answered 'Yes' to the previous question, what level of fellowship within the Higher Education Academy do you hold?

- Fellow
- Senior Fellow
- Principle Fellow

Page 3: Understanding Feedback

Please rank what factors you think students are most looking for in assessment feedback. *With 1 being the most sought after factor and 5 being the least sought after factor.*

Please don't select more than 1 answer(s) per row.

Please don't select more than 1 answer(s) in any single column.

	1	2	3	4	5
Just their assignment grade	☐	☐	☐	☐	☐
Further discussion of the issue or topic under assessment	☐	☐	☐	☐	☐
An evaluative justification of their assessment grade	☐	☐	☐	☐	☐
An interactive exchange with the tutor	☐	☐	☐	☐	☐
Suggestions for how they might improve subsequent assignments	☐	☐	☐	☐	☐

Do you view feedback as an ongoing process between the student and the tutor or as a one-time event? *Please rate your answer on a scale of 1-10, with 1 being you strongly view feedback as a one-time event and 10 being you strongly view feedback as an on-going process.*

Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	6	7	8	9	10	
Feedback as a one-time event	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Feedback as an on-going process

Page 4: Audio-Feedback Content

Please rate how well you think you were you able to explain points to your students by using audio-feedback on their assignments:

Please don't select more than 1 answer(s) per row.

	Not at all	Somewhat	Adequately	Well	Very clearly
How well were you able to explain grammatical problems to students?	☐	☐	☐	☐	☐
How well were you able to explain structural problems to students?	☐	☐	☐	☐	☐
How well were you able to explain content problems to students?	☐	☐	☐	☐	☐
How well were you able to explain referencing problems to students?	☐	☐	☐	☐	☐

Do you think that the balance of positive and negative comments within the feedback you provided changed by using the audio, rather than the written, format?

- ○ Yes - I provided slightly more positive comments on the students work using audio-feedback
- ○ Yes - I provided slightly more negative comments on the students work using audio-feedback
- ○ No - I provided the same balance of positive and negative comments in audio-feedback as I would have with written-feedback

Do you think that the level of detail in your audio comments differed to that in the written comments you have previously provided?

- ○ Yes - My audio comments were more detailed than my written comments
- ○ Yes - My audio comments were less detailed than my written comments
- ○ No - My audio and written comments contained the same amount of detail

Do you think that the length of your audio-feedback differed to that of the written-feedback you have previously provided?

- ○ Yes - My audio-feedback was longer than my written-feedback
- ○ Yes - My audio-feedback was shorter than my written-feedback
- ○ No - My audio-feedback was the same length as my written-feedback

Page 5: Relational Impact of Audio-Feedback

Please rate how strongly you agree with the following statements about the audio-feedback you have provided to students:

Please don't select more than 1 answer(s) per row.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Providing audio-feedback feels more personalised to my students work, than written-feedback	☐	☐	☐	☐	☐
Providing audio-feedback helps me to feel more present in my students learning, than written-feedback	☐	☐	☐	☐	☐
Providing audio-feedback helps me to express a greater interest in my students work, than written-feedback	☐	☐	☐	☐	☐
Providing audio-feedback helps me to convey a greater sense of caring towards my students, than written-feedback	☐	☐	☐	☐	☐
By providing audio-feedback, I feel that students may feel more confident in approaching me for further face-to-face feedback on their assignments	☐	☐	☐	☐	☐

Page 6: Would You like to Participate Further?

We are looking to do some further research about your use of the audio-feedback method on Turnitin Grademark. If you would be interested in participating, please enter your email address below:

Page 7: Prize Draw

If you would like to be entered into the prize draw, please enter your email address below:

Page 8: This is the end of the survey - thank you for your participation

We previously informed you that the purpose of the survey was to gain an understanding of your perception and provision of student feedback. The goal of our research is to understand whether these perceptions change dependenting upon the method of providing feedback (e.g. Written or Audio-feedback).

If you decide you would like to remove your data from this research or would like to receive a summary of the research findings, please contact the researchers Alexandra Brookes (alb61@aber.ac.uk), Dr Gareth Norris (ggn@aber.ac.uk) or Dr Heather Norris (hnn1@aber.ac.uk).

Thank you for your participation.

Appendix F Content & Linguistic Analysis Tutor Consent Form

Project title: Audio Versus Written Feedback

We are conducting a content analysis to gather some information about the way feedback is provided to students when using different methods of feedback delivery (e.g. using audio feedback or written feedback). It is hoped that the results obtained from this study will help guide the way in which feedback is provided.

This research is being led by Alexandra Brookes (alb61@aber.ac.uk), Dr Gareth Norris (ggn@aber.ac.uk) from the departments of Psychology and Criminology at Aberystwyth University.

You have been contacted because we are interested in looking at the assignment feedback you provided to students in the module "CR12320", of the academic year 2016/17. The module you provided feedback within is of interest to us because both audio and written feedback was given to students.

We would like to analyse 30 pieces of feedback from within this module. If you chose to allow us to include your feedback data in our study, you will remain anonymous throughout the analysis and in any publications that result from this research.

If you consent to anonymous data being used for research, please returned a signed form to Alexandra Brookes at alb61@aber.ac.uk.

If you have any further questions or concerns about this study, please contact:

Alexandra Brookes
Email: alb61@aber.ac.uk
Tel: 07972274515

Participants Signature Date

Researchers Signature Date

Appendix G Content Analysis Coding Manual

Coding Manual

The feedback classification system is adopted from the work of Brown & Glover (2006) to suit the needs of the Psychological discipline. This system allows for feedback to be analysed within the conceptual framework of Nicol and Macfarlane-Dick (2004).

Coding Feedback Comment Type

Five main categories of feedback comments are recognized based on current feedback practice based on psychology assignments at Aberystwyth University. Each category may then be subdivided to enable further analysis of the types of feedback within each category. The lower-case codes ascribed to each have been chosen to reflect directly the type of feedback comment that has been made by adopting the same first letter.

Comments on the Content of the Students Response:

Ce: Error/ misconception:

When the student has misunderstood a concept, or made a mistake in their essay content, that the tutor wishes to correct.

Co: Omission of relevant material:

When the student's work required further development in terms of what relevant content they discussed in relation to the essay question set.

Ci: Irrelevant material included:

When the student includes content in their essay that the tutor believes does not aid them in answering the question set.

Comments Designed to Develop Students Skills:

Se: Syntax/Grammar/Punctuation/Word Order/ Spelling:

When the tutor's feedback comments are aimed at the students use of grammar, syntax, punctuation, word order and spelling within their work.

Sca: Critical analysis:

When the tutor's comments are aimed at how the student has presented their argument or claim in relation to the essay question. This may include how the student has addressed the question within their essay and how well their evidence supports the claims they are aiming to make.

Sr: Referencing/Citation/Quotation/Bibliography:

When the tutor's comments are aimed at providing guidance on how to reference correctly, and how to store and manage such references.

Sre: Research:

When the tutor's feedback comments are aimed at the student's ability to find, read, and conduct comprehensive searches of the relevant literature.

Sp: Presentation:

When the tutor's feedback comments cover page numbering, subtitles, figures, tables, captions, contents pages and so on, within the students work.

Sa: Academic Register:

When the tutor's comments relate to the appropriate language to use within a particular context – this would cover such as the student using an informal style of writing.

Sw: Writing Structure:

When the tutor's comments refer to the structural organization of the assignment, either in terms of the constituent sections – introduction, discussion, conclusion and so on – or at a paragraph or sentence level, which may affect the clarity or flow of the students work.

Qualitative Assessment of the Students' Performance – Motivational Comments:

Mp: Praise:

When the tutor expresses of approval or admiration for the students work within their feedback.

Me: Encouragement:

When the tutor gives the student support, confidence, or hope in relation to their current or future work within their feedback.

Qualitative Assessment of the Students' Performance – De-Motivational Comments:

DMj: Judgement of the students' performance as personal and negative:

When the tutor judges the student's performance in a personal and negative fashion within their feedback comments (e.g. as careless).

Comments that encourage further learning:

Fd: Dialogue with a Student Encouraged:

When the tutor provides feedback comments that encourage the student to contact them or see them in person regarding their work.

Ff: Further Study/ Assessment Tasks Referred to:

When the tutor refers to the student's future assignments within their feedback comments.

Fr: Resource Materials Referred to:

When a tutor refers to possible materials that may aid the student within their feedback comments.

Coding Feedback Depth

"The extent to which feedback comments may help students to improve their learning are determined by analyzing their depth. Different levels of tutor comments are assigned number codes to reflect their depth, with the exception of 'de-motivational feedback'. With respect to content and skills a tutor can:

- Acknowledge a weakness: i.e. acknowledge a performance gap exists (level 1).
- Provide a correction: i.e. give the student the information needed to close the gap (level 2).
- Explain why the student's response is inappropriate/why the correction is a preferred response (level 3). This then closes the feedback loop (Sadler, 1989).

Note that any one feedback comment from a tutor may be assigned more than one code. For example, a tutor may acknowledge (Ce1) and correct a factual error (Ce2) by using negative words or phrases (DMn). Similarly, a tutor may acknowledge the presence of irrelevant material (Ci1) and correct it because it is erroneous as well (Ce2). There is also a high degree

of subjectivity involved in assigning codes to comments and so any analysis using the code provides pointers to strengths and weaknesses in feedback practice, not a precise diagnosis" (Brown & Glover; 2006, p. 85).

Appendix H Positive Attitudes Expressed in Audio Feedback

Rank	Word	Frequency	% of Code
1	Good	7	10.6%
2	Well Done	6	9.1%
2	Well	6	9.1%
2	Clear	6	9.1%
3	Interesting	5	7.5%
4	Like	3	4.5%
4	Relevant	3	4.5%
5	Highlight	2	3.0%
5	High Standard	2	3.0%
6	Clearly	1	1.5%
6	Detail	1	1.5%
6	Considered	1	1.5%
6	Together	1	1.5%
6	Structured	1	1.5%
6	Organised	1	1.5%
6	Appropriate	1	1.5%
6	Addresses	1	1.5%
6	Come to life	1	1.5%
6	Synthesised	1	1.5%
6	Positive	1	1.5%
6	Logical	1	1.5%
6	To The Point	1	1.5%
6	Useful	1	1.5%
6	Improve	1	1.5%
6	Excellent	1	1.5%
6	Exceptional	1	1.5%
6	Terrific	1	1.5%
6	Flowing	1	1.5%
6	Explicit	1	1.5%
6	Rationale	1	1.5%
6	Pleased	1	1.5%
6	Joy	1	1.5%
6	(I was) Looking Forward	1	1.5%
6	Wish	1	1.5%
6	Proper	1	1.5%

Appendix I Positive Attitudes Expressed in Written Feedback

Rank	Word	Frequency	% of Code
1	Good	14	20.0%
2	Well Done	11	15.7%
3	Accurate	9	12.8%
4	Substantial	5	7.1%
4	Well	5	7.1%
4	Fair	5	7.1%
5	Informed	4	5.7%
6	Clear	3	4.2%
7	Nice	2	2.8%
7	Excellent	2	2.8%
7	Relevant	2	2.8%
8	Effort	1	1.4%
8	Thought	1	1.4%
8	Orderly	1	1.4%
8	Neatly	1	1.4%
8	Detailed	1	1.4%
8	Structured	1	1.4%
8	Comprehensive	1	1.4%
8	Correct	1	1.4%

Appendix J Negative Attitudes Expressed in Audio Feedback

Rank	Word	Frequency	% of Code
1	Confused	4	7.1%
1	Unsure	4	7.1%
1	(Un)acceptable	4	7.1%
1	Questionable	4	7.1%
2	Brief	3	5.3%
2	(Un)detailed	3	5.3%
2	(Ir)relevant	3	5.3%
2	(Un)clear	3	5.3%
3	Cumbersome	2	3.5%
3	Difficult	2	3.5%
3	(In)appropriate	2	3.5%
3	General	2	3.5%
3	Lack	2	3.5%
4	Odd	1	1.7%
4	Okay	1	1.7%
4	(Un)related	1	1.7%
4	Briefly	1	1.7%
4	Small	1	1.7%
4	Short	1	1.7%
4	Relevance	1	1.7%
4	Bitty	1	1.7%
4	(Not) Flow	1	1.7%
4	(In)coherent	1	1.7%
4	Condensed	1	1.7%
4	Consideration	1	1.7%
4	(In)concise	1	1.7%
4	Shortcomings	1	1.7%
4	Ramble	1	1.7%
4	Basically	1	1.7%
4	(In)explicit	1	1.7%
4	Missing	1	1.7%

Appendix K Negative Attitudes Expressed in Written Feedback

Rank	Word	Frequency	% of Code
1	Limited	9	16.9%
2	Errors	5	9.4%
3	Incomplete	4	7.5%
3	Lacks	4	7.5%
4	Little	3	5.6%
4	(Un)Clear	3	5.6%
4	Confusion	3	5.6%
5	Disappointing	2	3.7%
5	(In)correct	2	3.7%
5	Poor	2	3.7%
5	Like a list	2	3.7%
5	(Not) Consistently	2	3.7%
5	Coherency	2	3.7%
6	Omissions	1	1.8%
6	(In)sufficient	1	1.8%
6	Disorganized	1	1.8%
6	Inaccuracies	1	1.8%
6	Incoherently	1	1.8%
6	Clarity	1	1.8%
6	Difficult	1	1.8%
6	Descriptive	1	1.8%
6	Rushed	1	1.8%
6	(Not) Contribute	1	1.8%
6	(Not) Developed	1	1.8%

Appendix L Monoglossic Assertions made in Written Feedback

Rank	Word	Frequency	% of Code
1	Work Contains	12	24.4%
2	Work Exhibits	10	20.4%
3	Use	4	8.1%
3	It allows	4	8.1%
3	Ensure	4	8.1%
4	Avoid	3	6.1%
4	This Essay Has	3	6.1%
4	Your Essay	3	6.1%
5	Work Displays	2	4.1%
6	Full stops (come after)…	1	2.1%
6	Work Reads	1	2.1%
6	Work required	1	2.1%
6	Distinguish	1	2.1%

Appendix M Hetroglossic Contractive Assertions made in Audio Feedback

Rank	Word	Frequency	% of Code
1	Really	36	16.4%
2	Is	24	10.9%
3	Need(s/ed)	22	10.4%
4	But	19	8.6%
5	However	18	8.2%
6	Would	12	5.4%
7	Was	11	5.0%
8	You Have	7	3.1%
9	Will	6	2.7%
9	Only	6	2.7%
9	Don't	6	2.7%
9	Not	6	2.7%
10	Definitely	4	1.8%
10	In Fact	4	1.8%
10	You Do	4	1.8%
11	Really Need(s)	3	1.3%
11	I Have to	3	1.3%
11	I Was	3	1.3%
11	Show(s)	3	1.3%
12	The Fact	2	0.9%
12	Even	2	0.9%
12	Just	2	0.9%
12	Should	2	0.9%
12	Haven't	2	0.9%
13	I Have	1	0.4%
13	Must	1	0.4%
13	You Did	1	0.4%
13	You Hint	1	0.4%
13	Mustn't	1	0.4%
13	I Do	1	0.4%
13	I Can	1	0.4%
13	Although	1	0.4%
13	No	1	0.4%
13	I Wanted	1	0.4%
13	Do Have	1	0.4%
13	Are	1	0.4%

Appendix N Hetroglossic Contractive Assertions made in Written Feedback

Rank	Word	Frequency	% of Code
1	Need(s/ed)	19	14.1%
2	Is	17	12.6%
3	Should	11	8.2%
4	Although	10	7.4%
4	But	10	7.4%
4	Not	10	7.4%
5	Must	8	5.9%
6	Would	7	5.2%
6	Will	7	5.2%
7	You Have	5	3.7%
8	Demonstrate(d)	4	2.9%
8	Essential	4	2.9%
8	Certainly	4	2.9%
8	Was	4	2.9%
9	I Highly	3	2.2%
10	Show(s)	3	2.2%
11	However	2	1.4%
11	You Do	2	1.4%
12	Only	1	0.7%
12	That Said	1	0.7%
12	Whilst	1	0.7%
12	I Strongly	1	0.7%

Appendix O Hetroglossic Expansive Assertions made in Audio Feedback

Rank	Word	Frequency	% of Code
1	Could	12	16.0%
2	I Think	11	14.6%
3	Expository Questions	10	13.3%
4	Seems	7	9.3%
5	If	7	9.3%
6	Maybe	5	6.6%
7	I Suggest	3	4.0%
7	I Like	3	4.0%
7	I Would Say	3	4.0%
7	Might	3	4.0%
8	I am	1	1.3%
8	I Suppose	1	1.3%
8	In Subsequent Research	1	1.3%
8	I Thought	1	1.3%
8	I'm Not Sure	1	1.3%
8	In General	1	1.3%
8	May	1	1.3%
8	I Didn't Think	1	1.3%
8	In My Opinion	1	1.3%
8	If You Think	1	1.3%
8	Probably	1	1.3%

Appendix P Downscaling of Appraisals made in Audio Feedback

Rank	Word	Frequency	% of Code
1	Some	25	16.4%
2	Quite	20	13.1%
3	Could	13	8.5%
3	Think	13	8.5%
4	Really	12	7.8%
5	In Places	7	4.6%
5	A Bit More	7	4.6%
6	Some Places	6	3.9%
7	Few	5	3.2%
7	Maybe	5	3.2%
8	A Bit	4	2.6%
8	Seems	4	2.6%
9	Like	3	1.9%
10	Few More	2	1.3%
10	Few Places	2	1.3%
10	Briefly	2	1.3%
10	Little Bit	2	1.3%
10	Might	2	1.3%
11	Small Bit	1	0.6%
11	Exactly	1	0.6%
11	Tend	1	0.6%
11	Probably	1	0.6%
11	Unsure	1	0.6%
11	Slightly	1	0.6%
11	Okay	1	0.6%
11	Possibly	1	0.6%
11	May	1	0.6%
11	Suppose	1	0.6%
11	Hint	1	0.6%
11	Thought	1	0.6%
11	Not Sure	1	0.6%
11	Kind Of	1	0.6%
11	Some More	1	0.6%
11	Necessarily	1	0.6%
11	Relatively	1	0.6%
11	Suggest	1	0.6%

Appendix Q Upscaling of Appraisals made in Audio Feedback

Rank	Word	Frequency	% of Code
1	Really	36	22.0%
2	Need	26	15.9%
3	Would	22	13.4%
4	Very	19	11.6%
5	Trigram	6	3.6%
6	Definitely	5	3.0%
6	Will	5	3.0%
7	In Fact	4	2.4%
7	Real	4	2.4%
8	Have To	3	1.8%
9	Lots	2	1.2%
9	All	2	1.2%
9	Majority	2	1.2%
9	As Well As	2	1.2%
9	The Fact	2	1.2%
9	More	2	1.2%
9	Very Very	2	1.2%
10	Most	1	0.6%
10	Too	1	0.6%
10	Excellent	1	0.6%
10	Interesting	1	0.6%
10	And	1	0.6%
10	Terrific	1	0.6%
10	High	1	0.6%
10	Especially	1	0.6%
10	Mustn't	1	0.6%
10	Must	1	0.6%
10	Big Part	1	0.6%
10	Number	1	0.6%
10	Widely	1	0.6%
10	Actual	1	0.6%
10	Commonly	1	0.6%
10	Specifically	1	0.6%
10	Lots And Lots	1	0.6%
10	Well	1	0.6%
10	Good	1	0.6%

Appendix R Upscaling of Appraisals made in Written Feedback

Rank	Word	Frequency	% of Code
1	More	21	15.9%
2	Need	19	14.3%
3	Should	12	9.0%
3	Good	12	9.0%
4	Trigrams	11	8.3%
5	Very	9	6.8%
6	Must	8	6.6%
7	Will	7	5.3%
8	Would	6	4.5%
9	Essential	4	3.0%
9	Certainly	4	3.0%
9	All	4	3.0%
10	Highly	3	2.2%
11	Excellent	2	1.5%
11	Well	2	1.5%
11	Limited	2	1.5%
11	Much More	2	1.5%
12	Numerous	1	0.7%
12	Plunged	1	0.7%
12	Strongly	1	0.7%
12	Mostly	1	0.7%

Appendix S Survey Questions Developed from Previous Research

The research conducted by Ekinsmyth (2010) helped the researcher to develop their own questions categorised under section one of the survey, which was titled 'Using Your Audio Feedback'. This was as the survey developed by Ekinsmyth (2010) contained some questions which helped to ascertain students use of audio feedback and their perceptions concerning the usefulness of this modality. These questions were:

1. How many times have you listened to your audio feedback? 0 1 2 3 4 5 6+

2. Will you listen to your feedback again? Yes No

3. Please rate the following feedback methods for delivering useful feedback on the following scale:

	Very Useful		Neutral		Not useful
a. Audio feedback	1	2	3	4	5
b. Written feedback on scripts	1	2	3	4	5
c. Written feedback on marking sheets	1	2	3	4	5

4. Is audio feedback more or less helpful do you think in helping you to improve your future work?

Much more helpful		About same		Much less helpful
5	4	3	2	1

5. How effective was the audio feedback in conveying the strengths and weaknesses of your work?

Very effective		Neutral		Ineffective
5	4	3	2	1

The research conducted by Ekinsmyth (2010) also helped to develop one of the questions within section two of the survey, which was titled 'Understanding the Content of Your Audio Feedback'. This question related to student perceptions of the length of their audio feedback:

1. What did you think about the length of the feedback. Was it:

   Too short About the right length Too long

However, the research by Wakeman & McFarlane (2011) also held a question relevant to this section concerning contextual issues that may impact the student engaging with their audio feedback. This question was adapted and used within the survey for this research:

2. Where there any contextual factors which impacted on your ability to engage with the feedback:

   - Your reaction to the grade attained in the assignment
   - Lack of time to engage with the feedback

- Environment, e.g. background noise
- Difficulty understanding the speaker
- Other – please state

The research conducted by Attenborough, Gulati & Abbot (2012) helped the researcher to develop questions categorised under section three of the survey, which was titled 'Social Elements of Receiving Audio Feedback'. This was as the survey developed by these researchers contained three questions that helped form the structure of the five Likert scales used in this research. These questions were:

Please score your agreement on a scale of 1 to 5 to the following three statements, with 1 being you strongly agree and 5 being you strongly disagree:

1. "*Audio feedback feels more personal*"

2. "*Audio feedback helped me to experience my tutors' presence and interest in my learning*"

3. "*Compared to written comments, audio feedback reflects a sense of caring in my tutor*"

The research by Wakeman & McFarlane (2011) helped the researcher to formulate those questions within section four of the survey, which was titled 'Enhancing Audio Feedback'. This was at the survey developed by these researchers contained two questions that helped to form the basis of those asked in the survey for this study. These questions were:

1. How you think audio feedback could be enhanced:

    - Changes to the content of the feedback
    - Changes to the amount of feedback
    - Changes to the verbal delivery of the feedback
    - Improved IT support

2. What is your preference for feedback in the future?

    - Audio
    - Text
    - Both Audio and Text

Appendix T Drugs and Behaviour Module Survey

Drugs and Behaviour Audio-Feedback Survey

Page 1: Study Information

Welcome to the survey on audio-feedback.

The purpose of this survey is to gain an understanding of your opinions and experiences of the **audio-feedback** you received throughout the **module 'Drugs and Behaviour'** on all three of your **discussion posts** and **final essay.**

This research is being led by Alexandra Brookes (alb61@aber.ac.uk), Dr Gareth Norris (ggn@aber.ac.uk) and Dr Heather Norris (hnn1@aber.ac.uk) from the departments of Psychology and Criminology at Aberystwyth University.

This survey is completely anonymous and entirely voluntary; you can withdraw your participation at any time. There is no incentive to take part other than the option to be entered in to a prize draw to win a £10 amazon voucher, of which you can opt in or out for at the end of the survey. If you do want to be entered in to the draw you will need to provide an email address which will be recorded separately from your responses.

The online survey will ask 16 short 'tick-box' questions that will take approximately 5 minutes to complete.

Unfortunatly, we cannot act upon the responses that you make as this survey is for research purposes only. Importantly, your opinions and comments noted in this survey will not be passed on to any staff within the university. However, should you have any concerns regarding your feedback, please use the appropriate channels provided by the University (Tell Us Now, etc.). Your views will be used to guide the way in which feedback is provided. The data will be presented at conferences and in teaching publications.

Thank you for sharing your opinions and experiences of feedback.

Please tick the box to say you have read and agreed to the survey and consent to

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anonymous data being usedf for research: * *Required*

- I agree
- I disagree

Page 2: Using Your Audio-Feedback

Audio feedback is an audio recording made by the person whom has marked your essay or similar through Turnitin. Audio feedback is different to textual feedback in that it is the use of spoken rather than written comments about your assignment. During the module Drugs and Behavior, you received four separate pieces of audio feedback; meaning for each of your graded discussions and final essay, you were provided with an audio-file.

Of the four pieces of audio feedback you received in this module, how many did you listen to? * *Required*

- I listened to all four of my audio files
- I listened to 3 of my audio files
- I listened to 2 of my audio files
- I listened to 1 of my audio files
- I didn't listen to any of my audio files

On average, how many times did you listen to each piece of audio feedback?

- Once
- Twice
- Three Times
- Four Times
- Five Times
- Six Or More Times

Did you listen to your audio feedback that you received on an earlier discussion again, before you started writing another discussion post for a later week?

- Yes
- No

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Overall, how useful did you find your tutors audio-feedback comments to be?

- ○ Extremely useful
- ○ Very useful
- ○ Moderately useful
- ○ Slightly useful
- ○ Not useful at all

How does this overall usefulness of the audio feedback you received in this module differ from that of written-feedback you have received previously in other modules?

- ○ Much more useful
- ○ More useful
- ○ About the same level of usefulness
- ○ Slightly less useful
- ○ Much less useful

Focusing upon this level of usefulness, please rate how far you agree or disagree with the following four statements about the audio feedback you received in this module:

Please don't select more than 1 answer(s) per row.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree

Audio feedback helped me to clearly understand what I had done well in my assignments	☐	☐	☐	☐	☐
Audio feedback helped me to clearly understand the areas I had improved upon from my previous assignments	☐	☐	☐	☐	☐
Audio feedback helped me to clearly understand what I had done wrong in my assignments	☐	☐	☐	☐	☐
Audio feedback helped me to clearly understand what I need to do to get a better grade in the future	☐	☐	☐	☐	☐

Page 3: Understanding The Content Of Your Audio-Feedback

Turnitin allows for three minutes of audio recording. What did you think about the length of the audio feedback? Was it:

- ○ Too short
- ○ About the right length
- ○ Too long

Please rate how far you agree or disagree with the following four statements about the content of the audio feedback you received in this module, when compared to written feedback you have received in the past:

Please don't select more than 1 answer(s) per row.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
My audio comments were more detailed in their explanation of issues than written comments I have received in the past	☐	☐	☐	☐	☐
My audio comments were provided in language that was easier for me to understand than written comments I have received in the past	☐	☐	☐	☐	☐

My audio feedback helped me to understand disciplinary specific terms (e.g. critical analysis), by providing an explanation of how to achieve this in my assignment, more so than written comments I have received in the past	☐	☐	☐	☐	☐
My audio comments conveyed the tutors tone of voice which added more depth of explanation than written comments I have received in the past	☐	☐	☐	☐	☐
Listening to the spoken comments provided me with greater clarity than written comments I have received in the past	☐	☐	☐	☐	☐

Where there any contextual factors which impacted on your ability to engage with the content of the audio-feedback:

- ☐ No – I could engage well with my audio feedback
- ☐ Your reaction to the grade attained in the assignment
- ☐ Your lack of time to engage with the feedback
- ☐ The environment, e.g. background noise

- [ ] Difficulty understanding the speaker
- [ ] Technical difficulties (e.g. ability to access working speakers)
- [ ] Other

If you selected Other, please specify:

Page 4: Social Elements of Receiving Your Audio-Feedback

In feedback you may receive different types of comments: positive comments that praise encourage or motivate you (e.g. well done! I really like that you…); comments for suggested changes that may include explaining areas to improve for another assignment (e.g. one thing we could do to improve is…), and negative comments that highlight issues with skills or the assignment (e.g. you have not put effort into this work).

On average, how do you feel about the balance of positive, negative, and suggestive audio-feedback comments on your assessment?

- ○ Audio feedback was highly positive about the quality of the work
- ○ Mostly positive about the quality of the work, but with some changes suggested
- ○ Audio provided an equal amount of positive comments and comments for suggested changes
- ○ Mostly negative about the quality of the work, but with some changes suggested
- ○ Audio feedback was highly negative about the quality of the work

On average, do you feel this balance of positive, negative and suggestive comments you received in your audio feedback differed from that within the written-feedback you have received previously in other modules? Please rate how far you agree or disagree with the following three statements:

Please don't select more than 1 answer(s) per row.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
I felt my audio feedback contained more positive comments about my work than written feedback I have received in the past	☐	☐	☐	☐	☐

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I felt my audio feedback contained more suggestive comments about my work than written feedback I have received in the past	☐	☐	☐	☐	☐
I felt my audio-feedback contained more negative comments about my work than the written feedback I had received in the past	☐	☐	☐	☐	☐

Please rate how strongly you agree or disagree with the following statements about the audio feedback you received in this module:

Please don't select more than 1 answer(s) per row.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Agree
Audio feedback feels more personal than written feedback	☐	☐	☐	☐	☐
Audio feedback helped me to experience my tutors presence and interest in my learning more so than written feedback	☐	☐	☐	☐	☐

Audio feedback reflects a sense of caring in my tutor more so than written feedback	☐	☐	☐	☐	☐
Audio feedback helped to motivated me and developed my self-esteem more so than written feedback	☐	☐	☐	☐	☐
Audio feedback encouraged more peer and tutor conversations about learning	☐	☐	☐	☐	☐
Audio feedback promoted the approachability of your tutor	☐	☐	☐	☐	☐

During the module Drugs and Behaviour, did you organise a meeting for face-to-face feedback with a tutor from this module?

- ○ Yes
- ○ No

Page 5: Enhancing Audio Feedback:

If given the choice, would you choose to receive *audio* feedback, rather than *written* feedback, for other modules in the future?

- ○ Yes
- ○ No

If we were to provide audio feedback, how do you think it could be improved? Select all of those which you think apply:

- ☐ Changes to the content of the audio feedback (e.g. more of a focus on referencing issues)
- ☐ Extending the length of the recording (e.g. to more than three minutes)
- ☐ Improved IT support (e.g. ease of access)
- ☐ Changes to the verbal delivery of the comments (e.g. slower pace of speech)
- ☐ Include both audio and in-text written comments
- ☐ Other

If you selected Other, please specify:

Page 6: Would You Like To Be Paid To Participate Further?

We are looking to do some **short and informal follow-up interviews** about the feedback given in this module for which participants will be **paid a £10 Amazon voucher each**. These interviews will be taking place **after your exams!** If you would like to be considered, please enter your email address below:

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Page 7: Enter into the Prize Draw!

If you would like to be entered into the prize draw, please enter your email address below:

Page 8: Thank You For Completing This Survey

We previously informed you that the purpose of the survey was to gain an understanding of your experiences and use of the feedback provided in the Psychology module 'Drugs and Behaviour'. The goal of our research is to understand whether these perceptions change dependending upon the method of providing feedback (e.g. Written or Audio-feedback).

If you decide you would like to remove your data from this research or would like to receive a summary of the research findings, please contact the researchers Alexandra Brookes (alb61@aber.ac.uk), Dr Gareth Norris (ggn@aber.ac.uk) or Dr Heather Norris (hnn1@aber.ac.uk).

Thank you for your participation.

Appendix U Forensic Psychology Module Survey

Forensic Psychology Audio-Feedback Survey

Page 1: Study Information

Welcome to the survey on audio-feedback.

The purpose of this survey is to gain an understanding of your opinions and experiences of the **audio-feedback** you received in the **module 'Forensic Psychology'** on your **essay.**

This research is being led by Alexandra Brookes (alb61@aber.ac.uk), Dr Gareth Norris (ggn@aber.ac.uk) and Dr Heather Norris (hnn1@aber.ac.uk) from the departments of Psychology and Criminology at Aberystwyth University.

This survey is completely anonymous and entirely voluntary; you can withdraw your participation at any time. There is no incentive to take part other than the option to be entered in to a prize draw to win a £10 amazon voucher, of which you can opt in or out for at the end of the survey. If you do want to be entered in to the draw you will need to provide an email address which will be recorded separately from your responses.

The online survey will ask 16 short 'tick-box' questions that will take approximately 5 minutes to complete.

Unfortunatly, we cannot act upon the responses that you make as this survey is for research purposes only. Importantly, your opinions and comments noted in this survey will not be passed on to any staff within the university. However, should you have any concerns regarding your feedback, please use the appropriate channels provided by the University (Tell Us Now, etc.). Your views will be used to guide the way in which feedback is provided. The data will be presented at conferences and in teaching publications.

Thank you for sharing your opinions and experiences of feedback.

Please tick the box to say you have read and agreed to the survey and consent to anonymous data being usedf for research: * *Required*

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- I agree
- I disagree

Page 2: Using Your Audio-Feedback

Audio feedback is an audio recording made by the person whom has marked your essay or similar through Turnitin. Audio feedback is different to textual feedback in that it is the use of spoken rather than written comments about your assignment. In the module Forensic Psychology, you received audio-feedback on your essay. Did you listen to the audio-feedback you were given on your assignemnt during this module? * *Required*

- ○ Yes
- ○ No

How many times did you listen to your audio feedback?

- ○ Once
- ○ Twice
- ○ Three Times
- ○ Four Times
- ○ Five Times
- ○ Six Or More Times

Are you likely to listen to your audio-feedback again when prepairing for your future assignments?

- ○ Yes
- ○ No

Overall, how useful did you find your tutors audio-feedback comments to be?

- ○ Extremely useful
- ○ Very useful
- ○ Moderately useful
- ○ Slightly useful
- ○ Not useful at all

How does this overall usefulness of the audio feedback you received in this module differ from that of written-feedback you have received previously in other modules?

- ○ Much more useful
- ○ More useful
- ○ About the same level of usefulness
- ○ Slightly less useful
- ○ Much less useful

Focusing upon this level of usefulness, please rate how far you agree or disagree with the following four statements about the audio feedback you received in this module:

Please don't select more than 1 answer(s) per row.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
Audio feedback helped me to clearly understand what I had done well in my assignments	☐	☐	☐	☐	☐

Audio feedback helped me to clearly understand the areas I had improved upon from my previous assignments	☐	☐	☐	☐	☐
Audio feedback helped me to clearly understand what I had done wrong in my assignments	☐	☐	☐	☐	☐
Audio feedback helped me to clearly understand what I need to do to get a better grade in the future	☐	☐	☐	☐	☐

Page 3: Understanding The Content Of Your Audio-Feedback

Turnitin allows for three minutes of audio recording. What did you think about the length of the audio feedback? Was it:

- ○ Too short
- ○ About the right length
- ○ Too long

Please rate how far you agree or disagree with the following four statements about the content of the audio feedback you received in this module, when compared to written feedback you have received in the past:

Please don't select more than 1 answer(s) per row.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
My audio comments were more detailed in their explanation of issues than written comments I have received in the past	☐	☐	☐	☐	☐
My audio comments were provided in language that was easier for me to understand than written comments I have received in the past	☐	☐	☐	☐	☐

My audio feedback helped me to understand disciplinary specific terms (e.g. critical analysis), by providing an explanation of how to achieve this in my assignment, more so than written comments I have received in the past	☐	☐	☐	☐	☐
My audio comments conveyed the tutors tone of voice which added more depth of explanation than written comments I have received in the past	☐	☐	☐	☐	☐
Listening to the spoken comments provided me with greater clarity than written comments I have received in the past	☐	☐	☐	☐	☐

Where there any contextual factors which impacted on your ability to engage with the content of the audio-feedback:

- ☐ No – I could engage well with my audio feedback
- ☐ Your reaction to the grade attained in the assignment
- ☐ Your lack of time to engage with the feedback
- ☐ The environment, e.g. background noise

- [ ] Difficulty understanding the speaker
- [ ] Technical difficulties (e.g. ability to access working speakers)
- [ ] Other

If you selected Other, please specify:

Page 4: Social Elements of Receiving Your Audio-Feedback

In feedback you may receive different types of comments: positive comments that praise encourage or motivate you (e.g. well done! I really like that you…); comments for suggested changes that may include explaining areas to improve for another assignment (e.g. one thing we could do to improve is…), and negative comments that highlight issues with skills or the assignment (e.g. you have not put effort into this work).

On average, how do you feel about the balance of positive, negative, and suggestive audio-feedback comments on your assessment?

- ○ Audio feedback was highly positive about the quality of the work
- ○ Mostly positive about the quality of the work, but with some changes suggested
- ○ Audio provided an equal amount of positive comments and comments for suggested changes
- ○ Mostly negative about the quality of the work, but with some changes suggested
- ○ Audio feedback was highly negative about the quality of the work

On average, do you feel this balance of positive, negative and suggestive comments you received in your audio feedback differed from that within the written-feedback you have received previously in other modules? Please rate how far you agree or disagree with the following three statements:

Please don't select more than 1 answer(s) per row.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
I felt my audio feedback contained more positive comments about my work than written feedback I have received in the past	☐	☐	☐	☐	☐

I felt my audio feedback contained more suggestive comments about my work than written feedback I have received in the past	☐	☐	☐	☐	☐
I felt my audio-feedback contained more negative comments about my work than the written feedback I had received in the past	☐	☐	☐	☐	☐

Please rate how strongly you agree or disagree with the following statements about the audio feedback you received in this module:

Please don't select more than 1 answer(s) per row.

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Agree
Audio feedback feels more personal than written feedback	☐	☐	☐	☐	☐
Audio feedback helped me to experience my tutors presence and interest in my learning more so than written feedback	☐	☐	☐	☐	☐

Audio feedback reflects a sense of caring in my tutor more so than written feedback	☐	☐	☐	☐	☐
Audio feedback helped to motivated me and developed my self-esteem more so than written feedback	☐	☐	☐	☐	☐
Audio feedback encouraged more peer and tutor conversations about learning	☐	☐	☐	☐	☐
Audio feedback promoted the approachability of your tutor	☐	☐	☐	☐	☐

During the module Forensic Psychology, did you organise a meeting for face-to-face feedback with a tutor from this module?

- ○ Yes
- ○ No

Page 5: Enhancing Audio Feedback:

If given the choice, would you choose to receive *audio* feedback, rather than *written* feedback, for other modules in the future?

- ○ Yes
- ○ No

If we were to provide audio feedback, how do you think it could be improved? Select all of those which you think apply:

- ☐ Changes to the content of the audio feedback (e.g. more of a focus on referencing issues)
- ☐ Extending the length of the recording (e.g. to more than three minutes)
- ☐ Improved IT support (e.g. ease of access)
- ☐ Changes to the verbal delivery of the comments (e.g. slower pace of speech)
- ☐ Include both audio and in-text written comments
- ☐ Other

If you selected Other, please specify:

Page 6: Would You Like To Be Paid To Participate Further?

We are looking to do some **short and informal follow-up interviews** about the feedback given in this module for which participants will be **paid a £10 Amazon voucher each**. These interviews will be taking place **after your exams!** If you would like to be considered, please enter your email address below:

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Page 7: Enter into the Prize Draw!

If you would like to be entered into the prize draw, please enter your email address below:

Page 8: Thank You For Completing This Survey

We previously informed you that the purpose of the survey was to gain an understanding of your experiences and use of the feedback provided in the module 'Forensic Psychology'. The goal of our research is to understand whether these perceptions change dependending upon the method of providing feedback (e.g. Written or Audio-feedback).

If you decide you would like to remove your data from this research or would like to receive a summary of the research findings, please contact the researchers Alexandra Brookes (alb61@aber.ac.uk), Dr Gareth Norris (ggn@aber.ac.uk) or Dr Heather Norris (hnn1@aber.ac.uk).

Thank you for your participation.

Appendix V Forensic Psychology SPSS Data Output Without Mean Substitution

Statistics

		How many times did you listen to your audio feedback?	Overall, how useful did you find your tutors audio-feedback comments to be?	How does this overall usefulness of the audio feedback you received in this module differ from that of written-feedback you have received previously in other modules?	Audio feedback helped me to clearly understand what I had done well in my assignments	Audio feedback helped me to clearly understand the areas I had improved upon from my previous assignments	Audio feedback helped me to clearly understand what I had done wrong in my assignments	Audio feedback helped me to clearly understand what I need to do to get a better grade in the future	What did you think about the length of the audio feedback? Was it:	My audio comments were more detailed in their explanation of issues than written comments I have received in the past
N	Valid	19	19	19	19	19	19	19	19	19
	Missing	0	0	0	0	0	0	0	0	0
Mean		2.26	1.42	1.84	1.6316	1.8947	1.8947	1.7895	1.6842	1.8947
Mode		2	1	1	1.00	1.00	1.00	2.00	2.00	2.00
Std. Deviation		.733	.607	.834	.95513	.93659	1.04853	.97633	.47757	.93659

a. Multiple modes exist. The smallest value is shown

My audio comments were provided in language that was easier for me to understand than written comments I have received in the past	My audio feedback helped me to understand disciplinary specific terms (e.g. critical analysis), by providing an explanation of how to achieve this in my assignment, more so than written comments I have received in the past	My audio comments conveyed the tutors tone of voice which added more depth of explanation than written comments I have received in the past	Listening to the spoken comments provided me with greater clarity than written comments I have received in the past	Where there any contextual factors which impacted on your ability to engage with the content of the audio-feedback:	On average, how do you feel about the balance of positive, negative, and suggestive audio-feedback comments on your assessment?	I felt my audio feedback contained more positive comments about my work than written feedback I have received in the past	I felt my audio feedback contained more suggestive comments about my work than written feedback I have received in the past	I felt my audio-feedback contained more negative comments about my work than the written feedback I had received in the past	Audio feedback feels more personal than written feedback
19	19	19	19	19	19	19	19	19	19
0	0	0	0	0	0	0	0	0	0
2.0000	2.1579	2.0526	1.8421	1.0000	2.2632	2.2632	1.9474	3.6316	1.5263
1.00[a]	2.00	1.00[a]	2.00	1.00	2.00	2.00	2.00	4.00	1.00
.88192	1.16729	1.12909	.95819	.00000	.56195	.93346	.84811	.95513	.61178

Audio feedback helped me to experience my tutors presence and interest in my learning more so than written feedback	Audio feedback reflects a sense of caring in my tutor more so than written feedback	Audio feedback helped to motivated me and developed my self-esteem more so than written feedback	Audio feedback encouraged more peer and tutor conversations about learning	Audio feedback promoted the approachability of your tutor
19	19	19	19	19
0	0	0	0	0
1.6316	1.6842	2.1053	1.7368	1.5263
1.00	1.00	2.00	1.00[a]	1.00
.83070	.94591	.99413	.73349	.61178

Appendix W Forensic Psychology SPSS Data Output With Mean Substitution

Statistics

		Please tick the box to say you have read and agreed to the survey and consent to anonymous data being usedf for research:	How many times did you listen to your audio feedback?	Overall, how useful did you find your tutors audio-feedback comments to be?	How does this overall usefulness of the audio feedback you received in this module differ from that of written-feedback you have received previously in other modules?	Audio feedback helped me to clearly understand what I had done well in my assignments	Audio feedback helped me to clearly understand the areas I had improved upon from my previous assignments	Audio feedback helped me to clearly understand what I had done wrong in my assignments	Audio feedback helped me to clearly understand what I need to do to get a better grade in the future
N	Valid	22	22	22	22	22	22	22	22
	Missing	0	0	0	0	0	0	0	0
Mean		1.00	2.36	1.45	1.86	1.6364	1.9545	1.8182	1.7727
Mode		1	2	1	1	1.00	1.00[a]	1.00	2.00
Std. Deviation		.000	.902	.596	.834	.90214	.89853	1.00647	.92231

a. Multiple modes exist. The smallest value is shown

What did you think about the length of the audio feedback? Was it:	My audio comments were more detailed in their explanation of issues than written comments I have received in the past	My audio comments were provided in language that was easier for me to understand than written comments I have received in the past	My audio feedback helped me to understand disciplinary specific terms (e.g. critical analysis), by providing an explanation of how to achieve this in my assignment, more so than written comments I have received in the past	My audio comments conveyed the tutors tone of voice which added more depth of explanation than written comments I have received in the past	Listening to the spoken comments provided me with greater clarity than written comments I have received in the past	Where there any contextual factors which impacted on your ability to engage with the content of the audio-feedback:	On average, how do you feel about the balance of positive, negative, and suggestive audio-feedback comments on your assessment?	I felt my audio feedback contained more positive comments about my work than written feedback I have received in the past
22	22	22	22	22	22	22	22	22
0	0	0	0	0	0	0	0	0
1.7273	1.8636	1.9545	2.0909	2.0000	1.8182	1.1364	2.2273	2.2273
2.00	2.00	1.00	2.00	2.00	2.00	1.00	2.00	2.00
.45584	.88884	.84387	1.10880	1.06904	.90692	.63960	.52841	.92231

I felt my audio feedback contained more suggestive comments about my work than written feedback I have received in the past	I felt my audio-feedback contained more negative comments about my work than the written feedback I had received in the past	Audio feedback feels more personal than written feedback	Audio feedback helped me to experience my tutors presence and interest in my learning more so than written feedback	Audio feedback reflects a sense of caring in my tutor more so than written feedback	Audio feedback helped to motivated me and developed my self-esteem more so than written feedback	Audio feedback encouraged more peer and tutor conversations about learning	Audio feedback promoted the approachability of your tutor
22	22	22	22	22	22	22	22
0	0	0	0	0	0	0	0
1.9091	3.6818	1.4545	1.6364	1.6818	2.0909	1.7273	1.5000
2.00	4.00	1.00	1.00	1.00	2.00	2.00	1.00
.81118	.94548	.59580	.78954	.89370	.97145	.70250	.59761

Appendix X Forensic Psychology Module Semi-Structured Interview Schedule

Forensic Psychology Interview Guide

Introduction

We are conducting a small scale qualitative study to gather some feedback from students, like yourself, about the processes and value of audio-feedback. I may ask you to compare your experiences to written feedback you have received in other modules. The interview will be divided in to four general sections: the first discussing your overall experiences of feedback at university, moving on to discuss the audio feedback you received in the forensic module.

Before the interview, I asked if you could re-listen to this audio feedback so you could remember what was said.

- Did you do this? *If not, provide earphones and ask participant to re-listen to their feedback*

General Feedback (Ice-breaker)

First, I would like to get an understanding of your opinions of the feedback you receive more generally, rather than just focusing upon audio feedback.

- What are you looking for in your assignment feedback?
- Can you remember any unhelpful experiences of receiving assignment feedback?

Using your Audio-Feedback

In the forensic module, I gave you an audio file where I spoke about your essay on detecting deception and lies. I would like to discuss how you originally used this audio-feedback and how useful you found it.

- How many times did you listen to your audio-feedback when you first received it?
    - Why did you do this?
- Why would, or wouldn't, you listen to your audio-feedback again when preparing for the forensic exam or for other future assignments?
- Apart from listening to your audio feedback, did you work with your audio-feedback in any other way?
    - *Prompt: E.g. take notes*
    - Why did/didn't you do this?

- Does this differ to how you would normally use written feedback?

In relation to the next question, there will be a short precursor concerning the usefulness of feedback. Generally, useful feedback should help you to understand what you did well in your essay, what you could improve in your essay and provide you with strategies and an explanation of how to improve this for next time.

With this in mind let's think about your audio feedback:

- How useful did you find the audio-comments to be?
    - Could you explain this further? *prompt in relation to the three above criteria*
- Generally, do you think your audio feedback was more or less useful than written feedback you have received previously in other modules?
    - Why do you think this? *prompt in relation to the three above criteria*

Understanding The Content of your Audio Feedback

So now let's move on to talk more about the content of the audio feedback and how well you could understand what was being said to help you to improve your work in the future.

- Turnitin allows three minutes of audio feedback. What is your opinion on the length of the audio feedback?
- What is your opinion on the amount of detail provided by your tutor in your audio feedback comments?
    - Do you feel the tutor was able to provide more, or less, detail in their explanation of issues by using audio rather than written comments on your work?

In relation to the next two questions, there will be a short precursor concerning the clarity of language itself used in feedback and the use of academic buzzwords. Feedback should be provided in basic language that communicates clearly what needs to be done to improve. Academic buzzwords, concern phrases you may have in feedback e.g. 'needs to include more critical analysis' or 'needs to be more reflective', that may be provided as a short statement which has no further explanation or detail on what is required to achieve this.

With this in mind let's think about your audio feedback:

- Do you think that your spoken audio comments were provided in a language that was easier for you to understand than written feedback you have received in the past?
    - Can you explain why you think this?

- Do you think that your audio feedback helped you to understand academic buzz words (e.g. critical analysis) more so than written feedback you have received in the past?
    - *Prompt: Were the terms referred to without or with an explanation of how to achieve this in your assignment*
    - Can you explain why you think this with an example?

In relation to the next question, there will be a short precursor concerning the use of formal and informal language. The tone, choice of words, sentence structure, and the personality we communicate varies between formal and informal language. Formal language is more structured and does not use first person pronouns such as 'I' or 'We', whereas informal language does use these and is more casual and spontaneous.

With this in mind let's think about your audio feedback:

- Do you think that your audio feedback contained more formal or informal language?
    - Why do you think this?
    - Do you feel this impacted on how well you could understand your feedback?
    - Do you think that audio feedback differs to written feedback in the amount of formal or informal language used?

- Do you think that hearing your tutors tone of voice and intonation had an impact on how clearly you could understand your feedback comments?

<u>Social Elements of receiving your Audio Feedback</u>

I would now like to move on to a different topic. I would like to discuss some issues concerning the social elements of receiving feedback. This really concerns how you felt when you listened to your audio-feedback comments.

…

In relation to the next two questions, there will be a short explanation concerning types of feedback comments. In feedback, you may receive different types of comments: positive comments that praise encourage or motivate you (e.g. well done! I really like that you...); comments for suggested changes that may include explaining areas to improve for another assignment (e.g. one thing we could do to improve is...), and negative comments that highlight issues with skills or the assignment (e.g. you have not put effort into this work).

- With this in mind, how did you feel about the balance of positive, negative and suggestive comments provided in your audio-feedback?

    - Would you have preferred this balance to be different? E.g. more suggestive comments
    - Did this balance effect your emotional response to your feedback?

- Do you feel this balance of positive, negative and suggestive comments you received in your audio feedback differed in any way from that within the written-feedback you have received previously in other modules?
    - Could you explain this further?

1. Do you feel receiving audio or written feedback better helps to motivate and develop your self-esteem?
    a. Can you expand on this?

- Do you think that you can better experience your tutor's presence and interest in your learning by receiving audio or written feedback?
    - Why do you think this?
- Do you think you can better experience a sense of caring from your tutor about your work by receiving audio or written feedback?
    - Can you expand on this?
- Do you think that receiving audio or written feedback feels more personal?
    - Can you elaborate?
- Do you feel that audio or written feedback better promotes the approachability of your tutor?
    - Why do you think this?
- Did you discuss your audio feedback with your peers?
    - Did you find this useful?
    - Do you think you would be more, or less, likely to discuss your audio feedback with your peers than to discuss your written feedback?

<u>Improving Feedback</u>

22. How do you think audio feedback could be improved?
    a. Prompt: e.g. Extending the length of the recording; Slower pace of speech; Both audio and written comments etc.

23. Do you think that audio feedback is better suited to some types of assessments (e.g. research reports, presentations, group work, essays) over others?

24. Results from the survey indicated that some students wanted a combination of audio and written feedback comments:
    a. Why do you think students would still like to have some written comments on their work?

25. Is there anything else you would like to add?

Appendix Y Drugs and Behaviour Module Semi-Structured Interview Schedule

Drugs and Behaviour Interview Guide

Introduction

We are conducting a small scale qualitative study to gather some feedback from students, like yourself, about the processes and value of audio-feedback. I may ask you to compare your experiences to written feedback you have received in other modules. The interview will be divided in to four general sections: the first discussing your overall experiences of feedback at university, moving on to discuss the audio feedback you received throughout the Drugs and Behaviour module.

Before the interview, I asked if you could re-listen to this audio feedback so you could remember what was said.

- Did you do this? *If not, provide earphones and ask participant to re-listen to their feedback*

General Feedback (Ice-breaker)

First, I would like to get an understanding of your opinions of the feedback you receive more generally, rather than just focusing upon audio feedback.

- What are you looking for in your assignment feedback?
- Can you remember any unhelpful experiences of receiving assignment feedback?

Using your Audio-Feedback

In the Drugs and Behaviour module, I gave you four audio files where I spoke about your discussion posts and final essay discussing the Vietnam war and addiction. I would like to discuss how you originally used this audio-feedback and how useful you found it.

- On average, how many times did you listen to each piece of audio-feedback?
    - Why did you do this?
- Why did, or didn't, you listen to your audio-feedback again when you prepared for further discussion posts or the final essay in the module?
- Apart from listening to your audio feedback, did you work with your audio-feedback in any other way?
    - *Prompt: E.g. take notes*
    - Why did/didn't you do this?

- Does this differ to how you would normally use written feedback?

In relation to the next question, there will be a short precursor concerning the usefulness of feedback. Generally, useful feedback should help you to understand what you did well in your essay, what you could improve in your essay and provide you with strategies and an explanation of how to improve this for next time.

With this in mind let's think about your audio feedback:

- How useful did you find the audio-comments to be?
    - Could you explain this further? *prompt in relation to the three above criteria*
- Generally, do you think your audio feedback was more or less useful than written feedback you have received previously in other modules?
    - Why do you think this? *prompt in relation to the three above criteria*

Understanding the Content of your Audio Feedback

So now let's move on to talk more about the content of the audio feedback and how well you could understand what was being said to help you to improve your work in the future.

- Turnitin allows three minutes of audio feedback. What is your opinion on the length of the audio feedback?
- What is your opinion on the amount of detail provided by your tutor in your audio feedback comments?
    - Do you feel the tutor was able to provide more, or less, detail in their explanation of issues by using audio rather than written comments on your work?

In relation to the next two questions, there will be a short precursor concerning the clarity of language itself used in feedback and the use of academic buzzwords. Feedback should be provided in basic language that communicates clearly what needs to be done to improve. Academic buzzwords, concern phrases you may have in feedback e.g. 'needs to include more critical analysis' or 'needs to be more reflective', that may be provided as a short statement which has no further explanation or detail on what is required to achieve this.

With this in mind let's think about your audio feedback:

- Do you think that your spoken audio comments were provided in a language that was easier for you to understand than written feedback you have received in the past?
    - Can you explain why you think this?

- Do you think that your audio feedback helped you to understand academic buzz words (e.g. critical analysis) more so than written feedback you have received in the past?
    - *Prompt: Were the terms referred to without or with an explanation of how to achieve this in your assignment*
    - Can you explain why you think this with an example?

In relation to the next question, there will be a short precursor concerning the use of formal and informal language. The tone, choice of words, sentence structure, and the personality we communicate varies between formal and informal language. Formal language is more structured and does not use colloquialisms or first person pronouns such as 'I' or 'We', whereas informal language does use these and is more casual and spontaneous.

With this in mind let's think about your audio feedback:

- Do you think that your audio feedback contained more formal or informal language?
    - Why do you think this?
    - Do you feel this impacted on how well you could understand your feedback?
    - Do you think that audio feedback differs to written feedback in the amount of formal or informal language used?

- Do you think that hearing your tutors tone of voice and intonation had an impact on how clearly you could understand your feedback comments?

<u>Social Elements of receiving your Audio Feedback</u>

I would now like to move on to a different topic. I would like to discuss some issues concerning the social elements of receiving feedback. This really concerns how you felt when you listened to your audio-feedback comments.

…

In relation to the next two questions, there will be a short explanation concerning types of feedback comments. In feedback, you may receive different types of comments: positive comments that praise encourage or motivate you (e.g. well done! I really like that you...); comments for suggested changes that may include explaining areas to improve for another assignment (e.g. one thing we could do to improve is...), and negative comments that highlight issues with skills or the assignment (e.g. you have not put effort into this work).

- With this in mind, how did you feel about the balance of positive, negative and suggestive comments provided in your audio-feedback?

- Would you have preferred this balance to be different? E.g. more suggestive comments
- Did this balance effect your emotional response to your feedback?

- Do you feel this balance of positive, negative and suggestive comments you received in your audio feedback differed in any way from that within the written-feedback you have received previously in other modules?
    - Could you explain this further?

2. Do you feel receiving audio or written feedback better helps to motivate and develop your self-esteem?
    a. Can you expand on this?

- Do you think that you can better experience your tutor's presence and interest in your learning by receiving audio or written feedback?
    - Why do you think this?
    - Do you feel this was an important factor given the module was taught online?
- Do you think you can better experience a sense of caring from your tutor about your work by receiving audio or written feedback?
    - Can you expand on this?
- Do you think that receiving audio or written feedback feels more personal?
    - Can you elaborate?
- Do you feel that audio or written feedback better promotes the approachability of your tutor?
    - Why do you think this?
- Did you discuss your audio feedback with your peers?
    - Did you find this useful?
    - Do you think you would be more, or less, likely to discuss your audio feedback with your peers than to discuss your written feedback?

<u>Improving Feedback</u>

26. How do you think audio feedback could be improved?
    a. Prompt: e.g. Extending the length of the recording; Slower pace of speech; Both audio and written comments etc.

27. Do you think that audio feedback is better suited to some types of assessments (e.g. research reports, presentations, group work, essays) over others?

28. Results from the survey indicated that some students wanted a combination of audio and written feedback comments:
    a. Why do you think students would still like to have some written comments on their work?

29. Is there anything else you would like to add?

Appendix Z Interview Participant Consent Form

Project Title: Audio versus Written-feedback

We are conducting a small scale qualitative study to gather some feedback from students and staff about the processes and value of different types of feedback. We are talking to individuals from the Psychology department and will be writing a paper based on the information you give us.
The interview will take about 30 minutes to complete. We don't anticipate any risks associated with your participation, but you have the right to withdraw yourself and your information from the research at any time. Your comments will be treated confidentially and quotations used in the write up will not be attributed to any individual student.

Ethical procedures for academic research undertaken from this University require that interviewees explicitly agree to being interviewed and how the information contained in their interview will be used. Would you please read the following information and, if you agree, sign this form to clarify that you understand the purpose of your participation and that you understand the conditions of your participation.

Participant information:

- The interview will be audio-recorded and a transcript will be produced
- The transcript of the interview will be analysed by the researcher Alexandra Brookes
- Access of the interview transcript will be limited to the lead researcher Alexandra Brookes and academic colleagues with whom she may collaborate with as part of the research process.
- All the interview content, including direct quotations from the interview, made available through academic publication or other outlets, will be anonymized so that you cannot be identified. Care will also be taken to ensure that other identifying information about yourself is not revealed.
- The actual recording will be kept on the university file store until the transcription and data analysis is complete. The information will be secured further via specific file password protection.
- Any variations of the conditions outlined above will only happen with your further explicit consent.

By signing this form I am agreeing that:

1. I am voluntarily taking part in this project. I fully understand that I don't have to take part and that I can stop the interview at any point;
2. The transcribed interview and the direct quotations from it may be used as described above;
3. I have read and fully understood the participant information;
4. I can request a copy of the transcript of my interview and may make edits I feel necessary to ensure the researcher has kept to their confidentiality agreement;
5. I can ask as many questions as I may have, and I understand that I can contact the researcher at any time with any further questions I have about the research.

Participants Signature Date

Researchers Signature Date

Contact information:

If you have any further questions or concerns about this study, please contact:
Alexandra Brookes
Email: alb61@aber.ac.uk
Tel: 07972274515

You can also contact Dr. Gareth Norris who is supervising this research:
Dr. Gareth Norris
Email: ggn@aber.ac.uk